DOCUMENT RESUME

ED 214 645 PS 012 738

AUTHOR	Esserman, June F., Ed.
TITLE	Television Advertising and Children: Issues, Research and Findings.
INSTITUTION	Child Research Service, Inc., New York, N.Y.
PUB DATE	81
NOTE	241p.
AVAILABLE FROM	Child Research Service, 18 East 48th Street, New York, NY 10017 (Free of charge; one book per request).
EDRS PRICE	MF01/PC10 Plus Postage.
DESCRIPTORS	Childhood Attitudes; *Children; *Comprehension; Consumer Economics; Early Childhood Education; Foreign Countries; Identification (Psychology); Imitation; *Influences; Literature Reviews; Nutrition; *Perception; Public Policy; *Television Commercials; Television Research; *Television Viewing
IDENTIFIERS	Australia; Critical Analysis; Defense Mechanisms

ABSTRACT

This volume consists of 10 papers dealing with issues, research and research findings regarding the effects of television advertising on children. The first paper critically examines recent research literature which bears on policy questions related to the effects of television advertising on children. Findings from a study designed to examine children's defenses against the persuasive techniques of television commercials are reported in the second paper. The third paper centers on children's perceptions of the realism or lack of realism of televised fiction, and the fourth paper describes a study designed to determine whether the way researchers pose questions to children might provide more valid conclusions as to how well children understand the differences between television programs and television commercials. Results from a study undertaken to determine the extent to which young children can distinguish between television programs and commercials are discussed in the fifth paper. In the sixth paper, policy issues in the controversial area of television advertising are delineated and critically examined. The seventh paper summarizes the major theories of identification and imitation, critically evaluates the pertinent empirical research, and raises the question of the applicability of such research findings to the influence of television on children. Young television watchers' knowledge of nutrition, specifically with regard to awareness of the benefits and hazards of sweets in their diets, is assessed in the eighth paper, and a new approach to understanding young children's product choice strategies is suggested in the ninth paper. Finally, the tenth paper reviews research evidence from the United States and Australia on the general impact of television advertising on children. (Author/MP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED214645

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

X Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

TELEVISION ADVERTISING AND CHILDREN

Issues, Research and Findings

Edited by

JUNE F. ESSERMAN, M.A.

With a Foreword by

GEORGE COMSTOCK

PS 01 2238

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

June F. Esserman/
Child Research Service

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CHILD RESEARCH SERVICE

New York

Copyright © 1981 by Child Research Service. All rights reserved.
Printed in the United States of America.

Library of Congress Catalogue Card Number: 81-66045

For further information, contact:

CHILD RESEARCH SERVICE
A Division of Hyatt-Esserman Research Associates, Inc.
18 East 48th Street, New York, NY 10017

To my husband Paul Esserman and
our children, Lauren and Dean,
for their love, support and good humor.

CONTENTS

Foreword: Against the Grain 1
GEORGE COMSTOCK

Introduction: New Research vs. Old Assumptions 5
JUNE ESSERMAN

Chapter 1: A Critical Review of Recent Research on the Effects of Television Advertising on Children 17
LLOYD BARENBLATT

Chapter 2: A Study of Children's Defenses Against Television Commercial Appeals 43
JUNE ESSERMAN

Chapter 3: Children's Perceptions of the Realism of Televised Fiction: New Wine in Old Bottles 55
HOPE LUNIN KLAPPER

Chapter 4: Measuring Children's Responses to Television Advertising 83
PAUL ZUCKERMAN and LAWRENCE GIANINNO

Chapter 5: A Quantitative Study of Young Children's Comprehension of Television Programs and Commercials 95
LESLIE GAINES and JUNE ESSERMAN

Chapter 6: Children and Television Advertising: Policy Issues, Perspectives and the Status of Research 107
JOHN ROSSITER

Chapter 7: Identification and Imitation in Children 133
MARTIN HOFFMAN

Chapter 8: Viewing of Commercials and Children's Understanding of the Rules of Nutrition 173
JUNE ESSERMAN

Chapter 9: The Young Child as Consumer 195
ELLEN WARTELLA et al.

Chapter 10: Research on Television Advertising's General Impact on Children: American and Australian Findings 223
JOHN ROSSITER

About the Contributors 239

FOREWORD

Against the Grain

GEORGE COMSTOCK

GEORGE COMSTOCK

Against the Grain

Since television changed in the 1950s from a household rarity to an appliance present more often than absent in American households, it has been the subject in the United States of continuing empirical scrutiny and evolving public controversy. With regard to children, this controversy has broadened from debate over the possible negative consequences of television at the expense of reading ability, play and social interaction with peers, intellectual development, and tastes and preferences in entertainment. It now extends to the possibility that violence in television drama might contribute to aggressive or delinquent behavior among young viewers, as well as the question of whether television advertising directed at children or their parents might have some harmful influence on their thought or behavior.

Much of the research on children's television has reflected the response of the scientific community to the controversies, and many significant studies in the sense of meriting attention, have been produced directly as the result of various inquiries by government bodies. The flow of findings, sometimes apparently consistent (but in fact divergent or irrelevant) and sometimes apparently in conflict (but in fact quite consistent and complementary) has made it difficult for the most alert and active scholar to keep intelligently informed. The challenge has been made especially severe by the fragmentary nature of the research. Children and television is a topic for study not only within a wide diversity of academic disciplines—psychology, sociology, political science, marketing, education, child development, communications—between which communication is often slow. It is also a topic for study within two very different undertakings between which there is only limited communication—the television and advertising businesses, and the

universities and various research institutes. The situation becomes further exacerbated when significant work emerges in different countries where, added to difficulties of language and dissemination, are barriers to comprehension and insight that may arise from the dissimilarities in the lines of inquiry and their intellectual foundations that distinguish the social and behavioral sciences in one society from those of another. In these varied circumstances, what is difficult for the committed Herculean scholar becomes impossible for someone with irregular interest or divided responsibilities.

Thus, this volume. It focuses on children and television advertising, although the scope of certain contributions is much broader and all have some claim to having some relevance to questions concerning television beyond those raised about children and advertising. It purposely brings together recent work that has not been prominently published and allows it to reach a wider audience. It includes some interesting data collected within a proprietary, commercial context, and in that respect is particularly useful for giving dissemination to that which typically is not disseminated at all.

Certain of the contributions would appear to go against conventional wisdom. For example, Klapper explores the question of the degree to which children perceive television as reflecting reality in a manner quite different from that employed by previous investigators, and produces results that are different and apparently inconsistent with the interpretations they advanced.

Much the same can be said of the other contributions. Lawrence J. Gianinno and Paul E. Zuckerman present data indicating that the degree to which children can be said to distinguish between commercials and the program itself appears to be greater when the children are asked to make some distinction than when they are simply asked about the nature of commercials.

The data collected by Child Research Service, Inc., indicates that children in fact have a fairly high level of nutritional knowledge—which implies that they are not the uninformed consumers many would suppose. It would, however, be open to debate whether knowledge is the solution, or its lack of efficacy in dissuading children from the consumption of excessive quantities of sugar is the problem. Martin L. Hoffman presents a detailed review of the scientifically important area of identification and imitation as investigated from the perspective of social learning theory, and

properly raises the question of the applicability of the findings to the influence of television on children.

And so in each case—through Ellen Wartella's insightful treatment of the factors involved in the understanding by children of television advertising and their use of the information gained in preferring one product over another; John Rossiter's treatment of related issues, and Lloyd Barenblatt's comments on the quality of some recent studies of children and advertising—we are compelled to reexamine and qualify one or another empirical or theoretical thread. Television in effect has, by its quantitative enlargement of the role of the mass media in the lives of children, enhanced the nagging prominence of that rhetorical question advanced by Plato:

> Then shall we simply allow our children to listen to any story anyone happens to make up, and so receive into their minds ideas often the very opposite of those we shall think they ought to have when they are grown up?
>
> —*The Republic*

It is the responsibility of the social and behavioral sciences to supply some factual, empirical documentation when that question is addressed in contemporary terms. Nothing more. Their weakness as a guide for action is that they may not provide any guidance at all until some personal values, which will vary from individual to individual, are entered into the equation. Thus the documentation that the amount of time the average American child spends viewing television each day has increased steadily over the past 25 years—a phenomenon the United States appears to have in common with most societies with television—is of no use until some value or another is introduced in regard to children's expenditure of time. Their strength, besides giving some protection against thinking slothfully and wrongly, is that data and findings evade proprietorship in regard to interpretation. Once data and findings have cracked the shell of collection and analysis, they go their own way regardless of the intellectual perspective, the biases, the assumptions, the pragmatic and material interests, and the varied loyalties of the investigator. In this respect, empirical research is an invariably liberating tide for all.

INTRODUCTION

New Research vs. Old Assumptions

JUNE ESSERMAN

JUNE ESSERMAN

New Research vs. Old Assumptions

There has been a growing concern since the 60's about the effects of television advertising on children. The pervasiveness of television in the lives of our children along with an increase in their consumer activities of making product choices, requesting products, and shopping has heightened our awareness and unease about commercials directed at children. There is concern about how to use this medium wisely to achieve a positive, beneficial effect, or at the very least, not a harmful one.

As director of Child Research Service I have been involved in researching and studying television effects on children for each of the factions concerned with the issues, policies and influence of commercials directed at children. Child Research Service has conducted studies for the United States government to detect and prevent deception in children's advertising; for private foundations interested in exploring the underlying issues; for the broadcast networks in connection with efforts to develop programs that communicate desirable social messages; and for businesses and advertising agencies wishing to test their communications to be sure they will be well liked and correctly understood by their young audience.

It has been our observation that much of the anxiety about advertising to children has focussed on television because of fears associated with the medium itself. Parents and others concerned with child development are worried about the influence of a relative new medium which children in the United States watch an average of 25 hours a week. What do children learn from this medium? How influential is it? How can we use it properly to aid children in their development and avoid negative effects? The fact that we faced an extraordinary increase in the pervasiveness of this

medium before we had sufficient time to understand it and accommodate to it no doubt added to our fears.

Moreover, the rapid social alterations occurring at the time television was introduced contributed greatly to anxieties about this medium. Parents saw unsettling changes occurring around them in attitudes toward family, law and order, discipline, sexuality, male and female roles. Many of these changes were unwelcome and others, though welcome, were disruptive and frightening. Bewildered as to their cause and direction, it is not surprising that television became a focus of parental anxiety. Television has become an easy scapegoat. It is a convenient doorstep on which to lay blame.

But if television has some responsibility for the social changes we see about us, for the way children develop, then surely, the nature of this influence must be explored in a highly rational way. Research must be framed and carried out in a most objective manner if we are to use this medium wisely.

But the context in which research concerning the effects of television advertising on children has been conducted has been anything but cool, rational, and objective. Rather it was in an atmosphere of accusations and warnings that this research, until very recently, was conducted and from which it badly suffered.

Anxiety often framed the questions asked by the research, and narrowed the perspective with which results were examined. Many researchers and policy makers intent upon finding evidence of harmful effects, jumped to conclusions on the basis of equivocal findings. The net result was that fear fostered a considerable misunderstanding of television advertising's actual and potential influence on children.

In quite another way, research itself contributed to this misunderstanding by the use of techniques appropriate for researching adults but not well suited to studying the reactions of young children. Thus, asking 4 and 5 year old children questions which required considerable verbal ability to answer, made children seem more immature in their capacity to comprehend, more suggestable, and more defenseless than they actually are. It is this error of treating children like miniature adults, asking the same kinds of questions we put to adults, modified only in that we speak more slowly and loudly (as we do sometimes with non-English speaking people) that has resulted in so many difficulties.

If you were to ask a four year old who is feeling ill, "Tell me what hurts you?" or "What are your symptoms?," the response would probably be "I don't know" accompanied by a howl of frustration and pain. But if you said "Show me where it hurts," the child would in most instances promptly point to the area of discomfort.

Inappropriate research methods and misguided research compounded the problem of understanding the effects of television advertising on children in three ways:

> First, by contributing misleading research findings,
> second, by obscuring the issues, and
> third, by failing to challenge "armchair" theories about children based on faulty, inadequate or total lack of data.

Many of these errors were revealed during a series of hearings held by the Federal Trade Commission in Washington D.C. in 1978, which were called to examine some of the issues and policies related to television advertising to children. Confusion about the underlying issues became evident, what was known and not known about the effects of television advertising became clearer, and biased assumptions about its influence were exposed. As illlustration, one petition seeking to eliminate television advertising to children cited research based on a small sample of only 13 children, which turned out to have serious statistical errors, as well. In other studies cited, broad conclusions were made from highly subjective and limited data. It is no surprise that these studies generally tended to confirm the researchers' prior suspicions about the effects of television. Lloyd Barenblatt's review of many of the studies cited in the Federal Trade Commission hearings, included in this volume, is a valuable, careful analysis that helps clarify some of the issues, the findings, and the reliability of the data.

These hearings, however, and the consumer movement of the 70's helped accelerate the pace and breadth of research and encouraged the reexamination of assumptions about the impact of television advertising on young people.

This volume brings together some of the results of the new research, some of the provocative new critical thinking that has been done with regard to the issues, a reevaluation of the meaning of past studies and some suggestions as to where further research is needed. It is hoped that the articles in this volume will provide a fuller picture of the research findings regarding effects of television

advertising on children, suggesting where the findings can be regarded with confidence and where the date is questionable or non-existent.

Advances in the methodology of researching children have been, in many ways, major keys to progress in understanding the issues and assumptions with regard to television commercials. The development for example, of non-verbal techniques for exploring children's perceptions has produced data which has forced us to reexamine a whole series of assumptions about children's ability to cope with this medium. It has led to a broader perspective which brings the influence of home and school into the picture, interacting with the influence of television. Thus the assumption that young children are by nature incapable of perceiving the difference between the commercial and the show, or understanding the selling intent of the commercial has been shown to be inaccurate.

Studies by Zuckerman and Gianinno, reported in this volume, using a new non-verbal question technique, demonstrated that 4 year olds can distinguish the product and characters in the commercial from the characters in the show. Donahue and Myers' research which also used a non-verbal technique suggests that even three year olds can make this distinction and moreover, perceive in a simple way, the commercial's selling intent. The chapter by Gaines and Esserman reports on a new study in which four year olds were able to verbalize in simple terms their recognition of the difference between the commercial and the show.

Similarly, the assumption that children are defenseless against the persuasive techniques of television and respond like programmed robots by requesting or buying anything presented in an attractive or amusing manner has been shown, in the "Children's Defenses" chapter, to be naive. Parents could have told researchers that years of watching and enjoying "Popeye" cartoons in which this much admired central character became strong, heroic and successful whenever he ate spinach failed to persuade the children of America that they liked and wanted this vegetable. To this day children rate it near the bottom of the list of foods they like regardless of their loyalty to "Popeye".

Cereal manufacturers who have marketed children's cereals with a high protein content could amply document the ability of children to resist persuasive advertising appeals. Despite well-executed advertising campaigns, most of these cereals failed to gain wide acceptance among children.

Here is a boy answering a question about when he would eat a particular food. Use of simple line drawings aids children's verbal comprehension and facilitates their decision-making process and ability to answer questions.

Children in a group interview talk about the pictures they have drawn showing their perception of a commercial's message. Projective drawings such as these allow children to express themselves nonverbally.

What we have begun to understand from more recent research is the key importance of parents and teachers in children's defense against the blandishments of television, even for products youngsters desire.

Informal observations of children, as well as research, suggest that approval from a loving parent or an admired teacher is a far more powerful influence on a child's choice of food than the most eye-catching, charming commercial.

An immobile, cold, impersonal screen, even with dazzling pictures moving across it, offers feeble competition for a child's loyalty compared to a parent's embracing arms, approval, and power to grant or refuse the child's request.

We have in the past failed to recognize and, therefore, encourage the opportunity for parents and schools to teach very young children to further develop and exercise their ability to be discriminating viewers and consumers. The faulty research that warned that children were inherently incapable of learning these skills before the age of eight was a disservice to children. It delayed the development of simple lessons parents and teachers could use to help children become more discriminating viewers. Tests of such lessons with children in kindergarten and the primary grades show that even very young children can increase their consumer and viewer skills significantly. Further, Child Research Service found, in its efforts to help the Consumers Union develop a consumer magazine for children called "Penny Power," that young consumers can be motivated to use their reasoning power and sales resistance in sensible ways.

That children can remember more, absorb more, and make more use of advertising information than we assume from the results of typical tests of advertising "recall" is well described by Ellen Wartella in her chapter on *The Young Child as Consumer.*

Her analysis of her own studies and those of others working with children point up the need to study what children learn from advertising with methods that focus on how and when children use the information in ads in making product choices. These research findings suggest that the way youngsters actually go about making product choices is more complex than the simple "stimulus-response" behavior some attribute to children.

The assumption that children use television as the basis of their views of reality, accepting uncritically what they see on the screen appears to overlook children's natural egocentrism and tendency to

judge television as "real" if it matches their own experience. Dr. Klapper's perceptive testing of children's responses with simple questions a child can really understand allowed her to discover that children of seven use their own lives as the basis for judging reality rather than the images they see on the television. Thus a child perceives fathers on television to be like "real" fathers to the degree they behave like the child's own father rather than the other way around.

Those who petitioned the Federal Trade Commission to severely restrict or eliminate advertising on Saturday morning television (which is dominated by children's programs) made another assumption that proved false. They argued that viewing many ads for snacks, sweets, carbonated sweet drinks, sugar coated cereals, and desserts confused children about the proper role of these foods in the diet, preventing them from learning the rules of good nutrition and how to choose good nourishing meals. The study reported in the chapter on "Children's Understanding of the Rule of Nutrition," revealed that children in the United States as young as five years of age had a fairly good working knowledge of what constitutes a good breakfast, lunch, supper, and snack. Moreover, they held very moderate views about how often they should eat sweets. Some said they ate more sweets than they believed they should but not because they were confused about what they ought to eat.

Evidence suggesting that television stimulates a desire for more sweets and, therefore, increases overall consumption is also questionable. Despite the advertising of candy on television, candy consumption on a per capita basis has declined over the years. Research clearly shows, however, that advertising affects the choices consumers make amongst the brands on the market. Thus, candy manufacturers find they must advertise for competitive reasons.

The assumption was also made that children readily imitate what they see on television, including commercials. Martin Hoffman's comprehensive review of the studies on identification and imitation in children leads to the conclusion that there is no strong evidence that television alone has any lasting positive or negative effects on children's social behavior. In situations where television seemed to increase good social behavior in young children, the programming was always supplemented by discussions and lessons to reinforce the ideas in the show. The findings point up the dominant influence of parents and teachers on children's response to what they see on

This boy is explaining the food he chose "to make a good dinner."

Children were shown a wide assortment of foods from which they were asked to choose a good breakfast, lunch, dinner and snack.

television. Without someone to reinforce or reward children's response to television messages, youngsters are not easily persuaded by this medium to modify their views or behavior. Witness the lack of any notable success in using television announcements (similar to commercials) to persuade those young people who need it most, to develop better habits with regard to the foods they eat, health care, and consumption of alcoholic beverages.

There has also been concern that television can little by little, negate the influence of parents and school, making children more sensitive to, and therby more persuaded by television commercials. Here too, the evidence refutes this hypothesis. John Rossiter's chapter on "The Effects of Television Advertising in the United States and Australia" reports on some of the studies that deal with this effect and presents his conclusions as to why he sees no evidence of such harmful effects.

Rossiter's chapter on policy issues with regard to television advertising to children analyzes the obvious and not so obvious issues in a way that clarifies their implications, their relationship to each other, and where research can or cannot be helpful in these policy decisions.

My own experience leads me to favor a research approach to all the issues, even those that appear highly dependent on values or difficult to research. There are several important benefits in approaching the policy issues related to children's television advertising in this manner.

First, a research approach fosters objective, critical attitudes, a more open mind regarding other points of view, and willingness to withhold judgment until the evidence has been examined.

Second, it encourages the testing of assumptions about television advertising's effects, prodding us to assess how much we really know about the questions at issue, and to recognize where our views are based only on personal convictions or untested theories.

Third, this approach forces us to think long and hard about developing new ways to research problems and questions that tend to be avoided because they are difficult to solve with current research methods. It expands the frontiers of knowledge, and adds to our understanding of television's effects, of how children learn, and of the relationship between parental influence and the mass media.

Research has shown that young children are more capable than we assumed of learning to be sensible consumers and more discriminating viewers. Ways in which parents and teachers can guide children in exercising and improving these skills have been developed and tested. Focusing on an educational approach brings into action the crucial influence of parents and teachers. It encourages parents to use their influence and to take responsibility for this aspect of their children's development. It suggests that social scientists and educators develop ways of helping parents play this role rather than abdicate this aspect of parenting to others in society. The added benefit of this approach is that the teaching of consumer and viewer skills help the child to deal with a broad range of selling techniques, not solely television commercials. In a free society, young consumers must learn to cope with many forms of advertising and promotion—often directed at adults but nonetheless perceived by children. In such a situation it would be well to remember that "if one is going to live by the ocean, it is wiser to teach your children to swim than to try to build a fence around the sea."

CHAPTER 1

A Critical Review of Recent Research on the Effects of Television Advertising on Children

LLOYD BARENBLATT

LLOYD BARENBLATT

A Critical Review of Recent Research on the Effects of Television Advertising on Children

I. INTRODUCTION

The purpose of this review is to examine critically recent research literature which bears on policy questions related to the effects of television advertising on children.

In order to do so, the studies were examined according to the main variables with which they dealt and are so arranged in the main body of this report. In addition three research studies, which, in the opinion of this reviewer, are apt to be importantly cited in the controversies about policy, are singled out for special attention.

It is the feeling of this reviewer that, of course, every safeguard should be taken to prevent possible unfair and/or harmful influences of television advertising, especially with regard to children. However, a high priority concern is that of the possible misuse of "research information" in the making of policy decisions. That, in the slightly longer run, will do the greater harm both to people and to the institution of Behavioral Science.

II. CRITERIA OF CRITICISM

The reviewing of these research reports requires specification of criteria according to which studies may be examined. Some of these criteria may be obvious and clear to the reader and some may be unfamiliar and/or meaningless depending on how well acquainted he or she is with methodology in the field of behavioral science research. For non-academics and tyros, the following guidelines are offered.

A. If representativeness of a sample is not ensured by random

or other systematic methods, the sample should be carefully specified by the author, the appropriate caveats of generalization should be made and those caveats should be taken into account by the reader.

B. Level of significance or "p" value, describes the probability that an obtained difference between groups or an obtained correlation is merely a result of random chance effects and that the "true" population value of the difference between groups is zero (or the "true" correlation is $r = .00$). For instance a reported significance level of $p = .05$ means that the odds are 5 to 100 that there is no difference between groups. It does not in itself indicate whether the relationship between variables is trivial, moderate, or strong. The *degree* of a relationship may be examined by squaring the correlation figure and reading it as the percent of the "effect" between the variables. For instance, with 200 cases, a correlation $r = .18$ is significant at the .01 level of probability but it accounts for only 3.24% of the "effect" under examination.

C. Labels or names used to describe variables may have little or no correspondence with the actual operations or measures used in testing or questioning the subjects. Understanding of the findings of a study requires analysis by those "operational definitions" (i.e., the actual questions asked, the actual measures used) rather than by labels used.

D. The logical relationship between a theory and way in which the researcher claims support for it should constitute a further criterion for evaluation. For instance much of the research in this area invokes the gloss of Piagetian theory but Piagetian theory often has no clear relationship to their measurements or interpretations.

III. REVIEW OF STUDIES ARRANGED BY RELEVANT VARIABLES

A. Maturational Level as an Independent ("Causal") Variable

The maturational levels of children, as they are affected by television commercials is clearly one of the main concerns in this area of policy related research. Although much is made of the Piagetian theory and concepts of cognitive developmental stages among the

investigators, their studies actually use either chronological age or school grade or both as the independent ("causal") maturation variable. One seeming but questionable exception is the reference by Rossiter and Robertson (1976) to a three "factor" variable termed "Piagetian Model." It is a composite of chronological age, parental educational level and exposure to television. This appears to be far removed from any conceptual correspondence to the Piagetian notions of cognitive stage development.

A possible reason why there is this gap between conceptual terminology and actual operations for measuring developmental stage is the absence of any standardized or psychometrically constructed instrument for measuring Piaget's cognitive levels.

The studies here examined are about equally divided as to the use of chronological age or school grade as the criterion for measuring maturational level. Rossiter and Robertson (1976) use a variable set labelled "BIODEV" which is made up of chronological age and school grade which, according to the authors, somehow is supposed to make this maturation measure more Piagetian. The correlation between chronological age and grade, however, is so high ($r = +.96$ as reported in one of these studies) that one or the other could be used alone and produce the same research results. There would be no point to using both in quantitative research.

1. Maturation level studies with dependent (outcome) variables of understanding the nature and/or purpose of commercials.

These studies seek to assess the relationship between age or grade with either verbal responses of the children as indicators of knowing what commercials are and/or their acting behaviorally to show discrimination between programs and commercials.

Scott Ward (1973) used a sample of 67 children between the ages of 5 and 12 in the Boston area. Open ended, hour-long interviews with the children in their homes provided protocols from which answers were coded. The categories were "Low Awareness", "Medium Awareness", and "High Awareness" but the criteria for this level required some understanding of "sponsorship" or "profit" while "Medium Awareness" could be indicated by statements like "to make people buy things" and "sell things."

Another dependent variable was the ability to discriminate between programs and commercials according to the verbal responses to an interview question. Two levels of differentiation and two age groups (5-8 and 9-12) are presented in a 2x2 chi square

analysis yielding a significance level of $p < .01$, showing the older the child, the more ability to discriminate programs from commercials. The *degree* of association between age and program/commercial discrimination is not given but can be estimated by converting the chi square to the pni square statistic. This would show that age accounts for 29.1% of the differences in ability to discriminate programs from commercials and therefore other causes and "error" account for the other 70.9% of the effect.

Ward and Wackman (1973) present the results of a survey study with 67 mother and child pairs which appears to consist of the same sample and include the same data as cited above. The article includes relationships among several other variables as well and is dealt with in some length and detail later in this review.

Bever, Smith, Bengen and Johnson (1975) conducted interviews with 48 children in Northern New Jersey. Six boys and six girls were included within each age group of 5-6, 7-8, 9-10 and 11-12. The authors present no statistical analysis but present a bar graph showing the number of children who explain the concept of what a commercial is in either "Figurative" or "Operational" terms.

These designations are taken from Piaget theory; older children are supposed, according to this theory, to be more operational rather than figurative. That is, they think and act with greater reality testing, logic and awareness of consistent principles.

Responses were coded as being either figurative or operational and their graph shows an increase in both figurative and operational responses, operational responses increasing more with age than do figurative responses. The article relies on an impressionistic, loosely inferential method of presentation.

Rossiter and Robertson (1976) employed "lengthy semi-structured personal interviews" with 224 children and telephone questionnaire interviews with their parents. First, third and fifth grade boys in approximately equal numbers were used. This investigation dealt with sixteen variables grouped into five canonical sets. In this section we will discuss only the findings related to age and grade as they affect understanding of the TV commercial concept. (This broad study will be dealt with at greater length later in this paper and also will be discussed in other sections of this paper dealing with other variables.)

There are two maturation variables, chronological age and school grade in this study. They make up the canonical set labelled

BIODEV. The contribution of BIODEV to the variation in understanding the nature of commercials is 39.57%, significant at the .001 level. The canonical set for understanding commercials is designated TVCCOGN and includes six variables:

1. Commercial/program discrimination
2. Perceive sponsorship or external message source
3. Perceive intended target audience
4. Identify informative intent
5. Identify persuasive intent
6. Understand symbolic, representational nature of commercials.

TVCCOGN is also found to be highly affected by age and grade taken as separate variables.

An article by Robertson and Rossiter (1974) presents findings of a survey which appears to be based on the same sample, the same data and the same coding that was used in a later study referred to above (Rossiter and Robertson, 1976). This article reports on 289 boys in the first, third and fifth grades. Percentages are given for each grade level on ability to differentiate commercials from programs. These are: first grade, 73.5%; third grade, 90.1%; and fifth grade, 100%. Recognition of commercials as having persuasive intent was given as: first grade, 52.7%; third grade, 87.1%; and fifth grade, 99%. Awareness of the "symbolic nature of commercials produced the following percentage breakdowns: first grade, 43.2%; third grade 71.3%; and fifth grade 93.7%. The grade differences are statistically significant at the .001 level.

The two "developmental" factors which predict the intent to persuade response are age and level of parents' education, age being the much stronger predictor. The authors interpret other attitudinal and/or cognitive variables as being either antecedents or consequences of perceiving "intent to persuade" in commercials; however, their rationale for the view that some perceptions or attitudes precede others in the building up of the set of attitudes and perceptions of commercials is a matter of assertion rather than demonstration.

Gianinno and Zuckerman (1977) in an experimental study, undertook an examination of children's non-verbal responses to test their abilities to distinguish between commercials and programs. The subjects were also questioned to determine their ability to verbalize the difference. Three age groups were used four, seven

and ten year olds, totalling to a sample of sixty four children.

The results are presented in the form of percentage tables and graphs without statistical tests of significance or correlations. By inspection of the tables and graphs, differences among the age groups on ability to verbalize the difference between commercials and programs was apparent across the three age groups with only two out of twenty four year olds being able to verbalize a difference and fifteen out of twenty ten year olds doing so. On a non-verbal task requiring the children to pick out pictures of commercial characters from program characters, more than half of the four year olds, nearly all of the seven year olds and all of the ten year olds were successful. On another non-verbal task involving matching products to pictures of the characters, nearly all of the four and seven year olds and 100% of the ten year olds were correct. The authors conclude that verbal responses to questions about the difference between commercials and programs may be quite misleading. This study is dealt with in some greater detail later in this review.

In support of the findings of Gianinno and Zuckerman reported above, is a reference in Adler et al. (1977) to a research report by Ward, Wackman and Wartella (in the form of a working paper). This study titled "Children Learning to Buy: The Development of Consumer Information Processing Skills", surveyed 615 mother-child pairs in Boston and Minneapolis. In concluding the authors state, "A somewhat surprising, but tentative finding is that some kindergarten children can identify the selling purposes of advertising and display other consumer-related skills beyond what would be expected from theoretical descriptions of their cognitive-stage abilities."

2. Studies Relating Maturation Level to Measures of Attitudes Toward Commercials.

Several studies deal with the relationship between age (or school grade) and variables concerned with liking or disliking of commercials and/or tendency to believe or disbelieve them. One study may, on casual reading as a second-hand report, seem to deal with the maturational variable of "cognitive level" as a causal variable (Rossiter and Robertson, 1976) but as noted above, it is really a measurement of attitudes toward and credulity about commercials in itself.

Ward and Wackman (1971) administered a questionnaire in the

classroom to 1,094 students in the eighth through twelfth grades. Twelve schools were used, all in St. George County, Maryland. Eighth and ninth graders (designated as "younger") were compared to tenth, eleventh and twelfth graders (designated as "older").

The study showed no differences between these two grade (or age) groups with respect to measures of attitudes toward commercials. The authors report that their operational definition of "attitude" involves both liking of and belief in television advertising. There is a finding of a slightly higher exposure to television in the younger subjects, significant at the .05 level. However, in their conclusion the authors state that this has no effect on attitudes nor any other variables in the study.

Scott Ward (1972) in the study previously cited, compared three age groups, 5-7, 8-10 and 11-12 as to their opinion in their answers to the question "Do commercials always tell the truth?" This table taken from their article show the results.

Although there are no tests of significance or measures of correlation, it can be seen that only a small minority (30% in the youngest group) of the subject answered "yes". There seems to be a definite relationship with age but it should be noted that in all age groups a clear majority answered "no" or its logical equivalent, "sometimes". The small sample size with its small numbers in each cell should be taken into account in interpreting these results.

Other findings of this study on the subject of age and reactions to commercials include reasons for liking or disliking commercials, and "basis for judging credibility of commercials." The tables showing these findings produce no meaningful differences among

TABLE 1
PERCEIVED CREDIBILITY OF COMMERCIALS BY AGES

"Do Commercials Always Tell the Truth?"	Age 5-7	8-10	11-12	Total
Yes	30%	17%	5%	18%
No	22	66	70	49
Sometimes	37	17	20	26
Dont				
Don't know	—	0	5	2
N.A.	11	0	—	5
	100%	100%	100%	100%
	(27)	(18)	(20)	(65)

age levels in view of the small number of responses in the cells. Ward, understandably, does not discuss age differences with respect to these variables.

In the article "Children's Information Processing of Television Advertising", Ward and Wackman (1973) propose that Piagetian theory calls for the use of "cognitive" level as a maturational criterion rather than mere chronological age. They proceed, first, to demonstrate a relationship (sizeable but not too close) between chronological age and their own measure of "cognitive level." However, the questions upon which they base their measure of cognitive level involve, according to the authors, " . . . understanding of what a commercial is . . . " and " . . . understanding of the purpose of commercials . . . " At least a strong suspicion may therefore be justified that when this variable is then used as an independent or causal variable it is loaded with: 1) Chronological age and 2) Attitudes towards commercials. It should not then be surprising that findings of high statistical significance should be obtained between "cognitive" level on the one hand and these dependent variables: 1) Understanding the Purpose of Commercials 2) Perceived Truthfulness of Commercials 3) Basis for Judging the Truthfulness of Commercials and 4) Reasons Why Commecials do (or don't) Tell the Truth (imputing the selling motive). This study is dealt with separately in a subsequent section of this report.

Robertson and Rossiter (1974) employ a survey sample of 289 primary catholic school boys in the first, third and fifth grade. This study is referred to earlier in this review in the section dealing with the ability to discriminate between programs and commercials and level of understanding the nature of commercials. Parts of the results of this study are relevant to the question of the effect of age (or grade) on attitudes toward and belief in the credibility of commercials. Excerpted from a table in the article, these are:

TABLE 2

	Grade		
	First	Third	Fifth
Trusts All Commercials	64.8%	30.4%	7.4%
Likes All Commercials	68.5	55.9	25.3
Wants All Products Advertised	53.3	26.7	6.4

By inspection of these results it may be seen that these data reflect a steep decline with age in trust and liking of commercials, especially with regard to the erosion of trust, from a clear majority in first graders, to a clear minority in third graders, to a very small proportion of fifth graders (7.4%).

A study by Rossiter and Robertson (1974) apparently with the same first, third and fifth grade sample as in the above study, compared two types of what they called "defenses" with respect to television advertising. The two types were: 1) attitudinal defenses", defined as beliefs, affect and motivational disposition to commercials and 2) "cognitive defenses" indicated by level of understanding of the nature of commercials. Then, having redefined these dispositional variables in terms of "defenses" the authors found an increase in both types of "defenses" with age as well as a shift in importance from attitudinal to cognitive "defenses" with age.

Age and school grade are related to measures of attitudes toward commercials in the study by Rossiter and Robertson (1976) based on the Philadelphia first, third and fifth grade sample reported in the previous study. In this study, three attude variables are combined in a canonical set. The canonical set labelled TVCATT consists of the three variables: 1) liking, 2) belief and 3) motivation ("i.e., a less receptive and more negatively toned overall attitude toward television advertising"). The dependent canonical set designated as BIODEV which is age and grade accounts for 31% of the variation in TVCATT. Grade accounts for a slightly but non-significantly higher relationship. The following tabled correlations show the intercorrelations (excerpted from the authors' table).

TABLE 3

	BIODEV	
	Age	Grade
Liking	-.27	-.30
Belief	-.39	-.40
Motivation	-.44	-.46

The percent of effect of the BIODEV (maturational) variables upon the TVCATT (attitudes toward TV comercials) variables can be obtained by squaring the correlations and multiplying by 100. These are called Eigenvalues and are tabled below:

TABLE 4

	BIODEV	
	Age	Grade
Liking	7.29%	9.00%
Belief	15.21	16.00
Motivation	19.36	21.16

All these relationships are significant at or above .001 level of probability. This is an illustration of how relatively small effects can be reported as highly significant.

This study is reported in some greater detail elsewhere in this review.

B. Degree of Exposure to Television Advertising as an Independent Variable

Goldberg and Gorn (1974) conducted an experimental study using a sample of 133 boys between the ages of eight and ten. The subjects were described as being from an upper-middle class, English-speaking suburb of Montreal.

Three levels of exposure to a "Cool Cast" toy commercial (0, 1 or 3 presentations, imbedded in a Flintstone program tape); and three levels of expectancy of receiving a "Cool Cast" toy (low, moderate and high, as manipulated by instructions to the subjects) were the treatment variables. The outcome variables were: 1) persistence in working at a puzzle task in order to win the toy; 2) attitude toward the toy as measured by a five-point bi-polar scale; and 3) another five-point scale indicating preference for the "Cool Cast" toy over another toy ("Hot Wheels" cars) which was not advertised in the presented tape. Results were:

- Children who saw one or three showings of the commercial scored higher on their liking of the toy than children who were not exposed to the commercial but only on the comparative measure, ("Cool Cast" vs. "Hot Wheels", $p < .01$) and not on the bi-polar scale of liking to not liking.
- There was no difference in liking the toy between children who were exposed to one showing as compared to those who saw the commercial three times.
- On the motivational task measure, a similar pattern emerged. There was a difference ($p < .05$) between 0 and 1 showings, but

no difference between 1 and 3 showings.

- Expectancy of winning the toy had an overall effect on motivation ($p < .05$) and both liking measures ($p < .05$).

The previously mentioned survey study by Rossiter and Robertson (1976) examined the effects of degree of exposure with a sample of 224 Catholic school boys in grades 1, 3 and 5. (The sample was the same as in other studies reported by these authors.)

The canonical set labelled TVEXP included a measure described as "present level of viewing" television and also number of TV sets in the home. Although the article does not specify how the present level of viewing was measured, it may be presumed that it was obtained from coding the open-ended interviews. Results showed an overall non-significant relationship between television exposure (TVEXP) and cognitive understanding of commercials (TVCCOG). Slight, barely significant ($p < .05$) negative relationships were found between: 1) level of present television viewing and ability to discriminate between commercials and programs ($r = -.16$ or 2.56% of the variance) and 2) "comprehension of the role of an external message source or sponsor" ($r = -.15$ or 2.25% of the variance). Level of television viewing also showed a slight, positive but statistically significant relationship to the three variables of attitudes toward TV labelled "liking", "belief" and "motivation." The shares of variance accounted for were 2.89%, 3.61% and 1.69% respectively.

Using a method of having mothers monitor and report on their child's television viewing, Galst and White (1976) examined the relationship between degree of exposure to television commercials and children's purchase influence attempts (PIAs) as they were observed in the shopping situation. A virtue of this study is the *in situ* aspects of the mothers' report of viewing and the observers' reports of actual mother-child shopping behavior. However, the sample was comprised of only 41 children of fathers in mostly professional and managerial positions. The children were between the ages of three years, eleven months, and five years, eleven months; all attended two affiliated Montessori schools. Moderate correlations between purchase influence attempts and hours of watching commercial (sponsored) TV were obtained. These were +.35 for PIAs per minutes in store, +.30 for number of independent PIAs and +.31 for total number of PIAs. These correlations were significant at $p < .05$ for this small sample size. They account for

12.25%, 9% and 9.61% of the obtained shared variance respectively.

Robertson and Rossiter (1976) attribute the effect of a rise in toy requests during a four-week period before Christmas to the effects of the increase in television toy commercials during that time period. A sample of 289 first, third and fifth grade boys in Philadelphia were surveyed as to "their most strongly preferred Christmas present choices at two time periods: five weeks before Christmas and just one week before Christmas." The children were also asked how often they had actually requested each item from their parents. Reported requests were coded into four categories: 1) toys and games, 2) education and craft items, 3) leisure and personal items, and 4) sports equipment.

The results are reported as showing increase in toy and game choices for each grade level (5.1%, 5.7%, and 5.5% for the first, third and fifth grades). A significance level of $p < .05$ is given for the pre-post change. This reviewer calculated the Eta square from the Analysis of Variance summary table presented in the article: this showed an effect of 1.57% of whatever happened in the survey period upon variations of change in toy and game choices.

The authors seem to make a broad assumption that it is only the increase in toy and game commercials that accounts for this (surprisingly small) increase in toy and game requests during the pre-Christmas period. This reviewer was astonished that Christmas itself, well known for its pervasive and powerful orientation around toys, and the expectancies of children, was not recognized by the authors as accounting for the increase effect.

A paper by Atkin and Miller (1975) reports on a study which compared 83 pre-adolescent subjects who reported themselves as previously seeing a "Clearasil" commercial "a lot" or "sometimes" with 117 pre-adolescent subjects who responded as "never" having seen the "Clearasil" commercial. The sample used consisted of fourth and fifth grade boys and girls in Lansing and East Lansing, Michigan. Half of these 200 subjects were shown a taped program which included the commercial and the other half saw a program which did not include it.

The results were measured in terms of six questions asked after having viewed the taped programs in the "experimental" setting and are presented as correlations in the table below, extracted from the report:

TABLE 5

Correlation (r)Between Treatment And:	Exposed At Home	Previously Unexposed
Concern about pimples	+.01	+.16
Knowledge about skin cream	+.02	+.28
Liking for "Clearasil"	–.07	+.28
Intent to buy "Clearasil"	–.08	+.27
Believe serious medicine claim	+.02	+.30
Believe dry pimple claim	+.02	+.25

The experimental showing or non-showing of the commercial had statistically significant effects for the combined previously exposed and previously non-exposed subjects on all the questions but the first (Chi Squares were given). But as one can see from the above table, it was only those subjects who had not seen the commercial before, at home, who were affected by the experimental showing. These results appear to lend support to the notion that repetition of commercials has a negligible effect or even non-effect on persuasion. (See the reference to repeated exposure effects in Goldberg and Gorn (1976) previously cited.)

In the same paper the authors report on the effects of short interval repeated exposure. Half the subjects who saw the "Clearasil" commercial, saw it on a taped program which contained one showing of it and half saw it on a tape which contained the commercial twice, several minutes apart. The findings are stated as showing very little effect on the six questions mentioned above, however, there was an appreciable effect of greater recall with two exposures.

Atkin (1976) presents the results of a survey study on 506 children in the fourth through seventh grades who gave their self-reports on the extent of their exposure to cereal commercials. An "exposure index" was created based on "five specific and general items times amount of Saturday television viewing." Consumption of eight heavily advertised cereal brands correlated +.41 with the exposure index and consumption of five lightly advertised brands correlated with the exposure index at +.27. When the correlations were "controlled" by partialling for grade, sex, status and school performance they were reduced to +.37 for the heavily advertised brands and +.24 for the lightly advertised brands. The authors

impute cause-effect to these relationships. They do not entertain the possibility of memory salience as an explanation or the possibility that family habits and lifestyle may be a common "cause" for viewing habits, eating habits, consciousness of commercials and brand salience.

C. Studies Involving Health Related Variables

A rather careful and thorough study by Milavsky, Pekowsky and Stipp (1975-76) investigated the relationship between exposure to proprietary drug commercials and: 1) the use of proprietary drugs, 2) the use of illicit drugs. Over a three-year period, survey data were collected from teenage boys and their mothers and fathers in two midwestern cities. Sample size varied between 274 and 331 for tables relating exposure to drug use although the general survey reached 643 cases.

The findings indicated a statistically significant but weak positive relationship between drug commercials exposure and proprietary drug use.

For illicit drug use the finding was a statistically significant but weak *negative* relationship.

The authors refrain from attributing illicit drug use to lack of exposure to commercials. Rather they point to evidence from the early waves of their extended survey that might support the proposition that "readiness" to use illicit drugs is related to low television watching.

A paper by Robertson, Rossiter and Gleason (1977) surveyed 673 children, in approximately equal numbers from the third, fifth and seventh grades, with the object of investigating the relationship between exposure to television drug commercials and five effect variables. These were 1) *Belief* in the efficacy of over-the-counter (OTC) medicines, 2) *Affect* toward (liking of) OTC medicines, 3) *Intention* to take OTC medicines when symptoms occur, 4) *Request frequency* to parents for OTC medicines, and 5) *Usage frequency* of OTC medicines.

The results show rather low orders of relationship between exposure (the same index was used as in the Milavsky *et al.* study) and all of the outcome measures. Two relationships, those with *Belief* and *Usage frequency*, turned out to be non-significant (*r*'s of +.04 and .00) when they were controlled (partialled) for five possibly confounding variables. These were: grade, sex, social class, illness level, and parental supervision of medicine use.

A survey study by Lewis and Lewis (1974), according to its title, purports to examine "The Impact of Television Commercials on Health Related Beliefs and Behaviors of Children". Children in two schools were given "social studies assignments" which provided the data. 117 out of 130 children in an affluent school and 91 out of 170 children in a disadvantaged school cooperated. A variety of health-related product types (e.g., Pain relievers, Intestinal remedies, Vitamins, Personal hygiene products) were reported on. The methods of data collection, measurement, reporting and sampling were so haphazard as to make the interpretation possibilities of this study of minimal value. However, the authors report that 90% of students in both schools made inferences from the commercials they watched which were as intended by the sponsors. *Belief* was higher among children in the disadvantaged group than among the affluent school children.

A study by Poulos (1975) is included in this review only because it was part of the Action for Children's Television petition before the Federal Trade Commission. Its announced intent is to determine whether children could be unintentionally influenced to eat poisonous plants after viewing a cereal commercial which associated the product "... with wild growing vegetation, thus emphasizing the natural qualities of the cereal..." Thirteen (sic) children were presented with a set of color photographs which included conventional vegetables and also non-edible and poisonous plants before and after viewing the commercial. The author reports shifts on a ten-point scale, from very bad to eat to very good to eat after viewing the ad. The methodological and reportage flaws in this study are too numerous to mention here. They include, for instance, not taking into account anchor effects in the scale shifts. The author reports, as her findings, results which would be considered non-significant by accepted behaviorial research standards.

V. STUDIES OF SPECIAL IMPORTANCE

Children's Information Processing of Television Advertising. Scott Ward and Daniel Wackman. In P. Clarke, (Ed.), *New Models for Mass Communication Research,* Sage pp. 119-146.

This study purports to investigate the relationship between two independent ("cause") variables; cognitive level and selectivity of attention to commercials and several dependent ("outcome") variables; understanding (or awareness) of the nature of commercials,

complexity of recall, reasons for liking or disliking, perceived truthfulness and selectivity of information in commrcials. The subjects were drawn from an original random sampling of 108 women in service clubs in the Boston area. Mother-child pairs were used as the case units. The sample size actually used shrank to 67 mother-child cases by reasons of refusal or failure to follow through in cooperating. The authors acknowledge an upper-middle class skewness in the sample. The age range of the children was 5 to 12, classified as four age groups of about equal numbers; 5-6, 7-8, 9-10, and 11-12. Mothers and children were given personal open-end interviews. In addition, each mother kept a log of her child's television watching during specified times.

The authors present the results as showing that children's understanding of the nature and purpose of commercials is related to their "cognitive level." Cognitive level is measured, however, by the answers to the same two questions which were coded for level of understanding (referred to in some places as "awareness") of the nature of commercials. Moreover the coding criteria for "understanding" are remarkably similar to the criteria for cognitive level. Thus the obtained finding appears to be a consequence of a near circularity in measurement. Indeed it is surprising that the obtained relationship between the supposedly different variables is not greater. (A chi square of 13.8 significant at the .005 level is given.)

Another stated finding of this study is the relationship between complexity of recall of commercials and cognitive level. This result should be considered in the light of the close correspondence, reported by the authors, between cognitive level and chronological age. (Chi square = 29.8, $p < .001$).

Other results of this research include findings of relationships of "cognitive level" to reasons for liking/disliking commercials, perceived truthfulness of commercials and reasons attributed to truth or falsity in commercials. These results should be considerd in the light of confounding factors in the way the measurements are derived. These include:

1. The measure of cognitive level itself is apparently loaded with attitudes toward and attributed purpose of commercials.
2. The children of different ages and different cognitive levels could be (and probably are) responding to different commercials which in turn vary in their products, entertainment appeals, and advertising strategies.

3. Cognitive level as measured from the coding of open-end questions may well reflect the articulateness of the children about the nature of commercials rather than their conceptual understanding and thus contain a bias toward the older children. A recent study by Gianinno and Zuckerman (1977) demonstrates experimentally that conceptual understanding of what commercials are *does* precede being able to verbalize about it.

One part of the study deals with what the authors call "selection of information"; this variable turns out to be attention given to commercials as observed by the mother. Attention is rated according to full attention, partial attention or no attention and logged according to time and day, and product category (toys and games, food and soft drinks, personal products, and other). Results are given as showing less differentiation for the low cognitive children than for the medium or high cognitives. The results are presented in line graphs without statistical tests of significance.

In sum this study suffers from several conceptual and methodological flaws which make conclusions from it questionable at the very least.

Canonical Analysis of Developmental, Social, and Experiential Factors in Children's Comprehension of Television Advertising. John R. Rossiter and Thomas Robertson, *Journal of Genetic Psychology*, 129 (1976) 317-327.

Canonical analysis is used in this study to assess statistically the correlational relationship between sets of independent (causal) and sets of dependent (outcome) variables. The variable sets examined in this study are:

Set 1: (TVCCOGN) - Measured by responses to six open-end questions, each question treated as a contributing variable. The questions were designed to measure respondents' ability to discriminate between commercials and programs, to comprehend the purposes and functions of commercials, and to understand the symbolic representational nature of commercials.

Set 2: (TVCATT) - This set is made up of three variables reflecting attitudes about commercials. These are liking, belief and motivation. (Motivation is defined as an overall receptivity

to and positive or negative attitude toward television commercials.)
Set 3: (BIODEV) - Despite the lofty "Piagetian" rationale, operationally this set turns out to be age and school grade.
Set 4: (SOCMOD) - This acronym stands for socialization and modeling. The three variables comprising this set are: degree of parent-child interaction, level of parents' education and presence of older siblings.
Set 5: (TVEXP) - Two variables make up this set. They are: 1) television exposure (the amount of television watching as self-reported by the child) and 2) the number of TV sets in the home.

The research subjects were 224 first, third and fifth grade boys in approximately equal numbers. The sampling method is not reported in this article. Data were collected ("semi-structured child interview protocols" and responses from telephone interviews with the parents of the child subjects) for "relevant family characteristics." The interview protocols' content was coded by three independent judges. The intercoder reliabilities are reported as being quite high (from .79 to .97).

The results of this study are presented as showing a high degree of relationship between the following sets of variables.

1. TVCCOGN (the ability to understand the nature of commercials) with BIODEV (the purported "ontogenetic" stage). The obtained relationship amounts to 39.57% of the shared variance, which is the degree, in percentage terms, of the effect of the "causal" set (BIODEV) on the "outcome" set (TVCCOGN).
2. BIODEV with TVCATT (attitudes toward television commercials). The effect in percentage terms is 30.78% of the variance (the higher the BIODEV, the more negative the TVCATT).
3. TVCCOGN withe TVCATT. The effect in terms of percentage of "causal" variance is 41.92% (negative).

However, these findings should be viewed in the light of the following criticisms:

1. BIODEV is really chronological age and school grade by its operational definition in this study. The correlation between age and grade is reported (not surprisingly) at

+.96. It is curious that the authors make much of referring to this variable as the Piagetian cognitive or "ontogenetic" stage.

2. The relationship between TVCCOGN and TVCATT is due largely to two correlations of variables between the sets. The r between liking commercials (in TVCCOGN) and being able to differentiate commercials from programs (in TVCATT) is .54. And the r between believing commercials (in TVCATT) and understanding that they do not represent reality (in TVCCOGN) is .52. These correlations are close to being circular and serve to load the obtained canonical relationship between the sets.

In their conclusions the authors point to socialization as an important "if secondary" contributing factor to the outcomes. Although the findings of the effects of SOCMOD reach highly acceptable levels of statistical significance, it should be noted that its effects are modest in terms of the percentage of variance effects it accounts for: these are 7.33% on attitudes toward TV commercials and 8.73% of the variance of understanding the nature of commercials (TVCCOGN).

This study is a good example of the kind of illusion that can be created by labeling variables in a way which is misleading. When one looks at the actual questionnaire measures one sees that "socialization" is merely the product of three measures, one of which is parents' education; it should not be surprising that "socialization" correlates modestly with the child's understanding of commercials.

In sum this study should be viewed with a great deal of circumspection.

Measuring Children's Responses to Television Advertising. Lawrence J. Gianinno and Paul A. Zuckerman. Paper read at the American Psychological Association, August, 1977.

The object of this experimental study was to compare verbal and non-verbal measures of children's ability to distinguish commercials from programs. Sixty-four (64) children (4, 7 and 10 year olds), were the subjects. In each age group, half the children were boys and half were girls. Each child was tested individually.

There were four experimental tasks. Children were presented with 20 pictures of characters who appear regularly on children's

television in the Chicago Metropolitan area. Ten (10) of these were program characters and ten were commercial characters.

1. *Identification and Recognition:* The subjects were asked to name each of the 20 pictured characters. For those not named, the experimenter then gave the names and asked the children to point at the right picture. A character was considered recognized if it was named or pointed out.
2. *Verbal Questioning:* Without the pictures present, the child was asked what a commercial is, and to describe the difference between programs and commercials.
3. *Paired Comparisons:* Pairs of pictures were presented, one pair at a time of a commercial character and a program character. The child was asked to identify which one was the commercial character. After responding, the child was asked to point to the character who shows "(Read the product name)" on television. The procedure was repeated for each of the ten (randomly generated) pairs.
4. *Picture Sorting:* The 20 pictures were shuffled and placed in front of the child. The child was asked to pick out all the characters who show "food or drinks" on television. The pictures were then reshuffled and placed out again. The child was then asked to select the characters who "try to make you want to buy something."

The data are presented in the forms of percentage tables and graphs without analysis for levels of significance of degrees of relationship between variables. The results for verbal responses show a pattern similar to previous research with the four year olds unable to articulate the "intent to sell" nature of commercials and only small proportions of the seven and ten year olds able to do so. The answers to the question calling for differences between programs and commercials produced verbal evidence of the ability to discriminate in 10% of the four year olds, 42% of the seven year olds and 75% of the ten year olds.

The non-verbal tasks, however, showed that many of the children who did not produce verbal responses showing discrimination or understanding of commercials, did know which characters appeared on commercials, thus indicating that they could discriminate between the two; 54% of the four year olds, 91% of the seven year olds and 100% of the ten year olds. Furthermore, nearly 100%

of the four and seven year olds and all of the ten year olds could name the product associated with the commercial characters and thus indicated a discriminal awareness that was not produced by the word "commercial" although that awareness was cognitively present.

The authors conclude that, "the results of this study add support to the proposition that young children's linguistic and cognitive abilities initially develop somewhat independently of one another. From this it follows that it is potentially misleading for a researcher to infer from verbal responses alone what children do or do not perceive and understand about commercials and programs."

This is of signal importance in interpreting other research which claims findings as to age effects on understanding of the nature of commercials.

VI. NEEDED RESEARCH IN THE AREA OF ADVERTISING TO CHILDREN

1. This area of inquiry lacks large scale survey studies based on nationally representative probability samples which employ sophisticated content coding and/or scaling procedures of measurement.
2. Path analysis studies which statistically trace out the sequential relationships from commercial viewing to ultimate effects upon the consumer of advertised products would answer some of the questions which are now really given non-sequitur answers in current research.
3. Research is needed to further clarify the degree of comprehension and conceptual understanding of commercials by younger children. Some evidence suggests that verbal responses are not valid in making this determination.
4. The differential effects of "split-run" commercials in comparable market areas coordinated with carefully drawn panel or survey samples would be a way of getting closer to an *in vivo* research arrangement.

REFERENCES

Adler, Richard P. *et al.*, "Research on the Effects of Television Advertising on Children." Report Prepared for National Science Foundation, U.S. Government Printing Office, Washington, D.C., (1977).

Atkin, Charles, "Television Advertising and Children's Observational Modeling, Paper, Mass Communication Division, International Communication Assn., (1976).

Atkin, Charles and Bradley S. Greenberg, "Parental Mediation of Children's Social Behavior Learning from Television," Project Castle Report No. 4, Washington, D.C. U.S. Office of Child Development, (August, 1977).

Atkin, Charles and Mark Miller, "The Effects of Television Advertising on Children: Experimental Evidence" Paper, Presented to Mass Communication Division, International Communication Assn., (April, 1975).

Barry, Thomas E. and R.W. Hansen, "How Race Affects Children's TV Commercials," Journal of Advertising Research, 13 (October 1973), pp. 63-67.

Bever, T.G., M.L. Smith, B. Bengen and T.G. Johnson, "Young Viewers Troubling Response to TV Ads," Harvard Business Review, Vol. 53, 6 (November-December 1975) pp. 119-21.

Clancy-Hepburn, Katherine, A.A. Hichey, and G. Neville, "Children's Behavior Responses to TV Food Advertisements," Journal of Nutrition Education, Vol. 6:3 (July-September 1974), pp. 93-96.

Donohue, Thomas R., "Effects of Commercials on Black Children," Journal of Advertising Research, Vol. 15 (December 1975), 41-47.

Elias, Marilyn, "How to Win Friends and Influence Kids on Television," Human Behavior, (April, 1974) pp. 16-23.

Feldman, Shel and Abraham Wolf, "What's Wrong with Children's Commercials," Journal of Advertising Research, Vol. 14, 9 (February 1974), pp. 39-43.

Feldman, Shel, Abraham Wolf, and Doris Warmounth, "Parental Concern about Child-Directed Commercials," Journal of Communication, Winter 1977, Vol. 27, pp. 125-137.

Frideres, James S., "Advertising, Buying Patterns, and Children," Journal of Advertising Research 13:1 (February 1973), pp. 34-36.

Galst, Joann and Mary White, "The Unhealthy Persuader: The Reinforcing Value of Television and Children's Purchase-Influencing Attempts at the Supermarket," Child Development, 1976, 47.

Gianinno, Lawrence J. and Paul A. Zuckerman, "Measuring Children's Responses to Advertising," Paper Presented at American Psychological Assn., (August, 1977).

Goldberg, Marvin E. and Gerald J. Gorn, "Children's Reactions to Television Advertising: An Experimental Approach," Journal of Consumer Research, 1 (September, 1974), pp. 69-75.

Griffin, Emilie, "What's Fair to Children? The Policy Need for New Research on Children's Perceptions of Advertising Content." Journal of Advertising, (1976) 5, 2.

Kay, Herbert, "Children's Responses to Advertising: Who's Really to Blame?", Journal of Advertising, I, 1 (1974).

Lewis, Charles E. and Mary Ann Lewis, "The Impact of Television Commercials on Health-Related Beliefs and Behaviors of Children," Pediatrics, 3 (March 1974).

Melody, William H. and Wendy Ehrlich, "Children's TV Commercials: The Vanishing Policy Options," Journal of Communication, 24:4 (Autumn 1974), pp. 113-125.

Meyers, Timothy P., Th.R. Donahue, and Lucy L. Henke, "Black Children's Perception on TV Commercials: A Cognitive Experimental Study," Appendix, Action for Children's Television Petition Before the Federal Trade Commission, (April, 1977).

Milavsky, J. Ronald., Berton Pekowsky and Horst Stipp, "TV Durg Advertising and Proprietary and Illicit Drug Use Among Teenage Boys," Public Opinion Quarterly, Volume 39, Winter 1975-76, pp. 457-481.

Pillemer, David and Scott Ward, "Investigating the Effects of Television Advertising on Children: An Evaluation of Empirical Studies," Paper Read at American Psychological Assn., (August 27, 1977).

Poulos, Rita Wicks, "Unintentional Negative Effects of Food Commercials on Children: A Case Study," Media Action Research Center, 1975.

Robertson, Thomas S. and John R. Rossiter, "Children and Commercial Persuasion: An Attribution Theory Analysis," Journal of Consumer Research, 1 (June 1974), pp. 13-20.

Robertson, Thomas S. and John R. Rossiter, "Short-Run Advertising Effects on Children: A Field Study," Journal of Marketing Research, 13 (February, 1976), 68-70.

Robertson, Thomas S. and T.G. Gleason, "Children's Conception of Medicine: The Role of Advertising," Center for Research on Media and Children, The Wharton School, (1977).

Rossiter, John R., "Reliability of a Short Test Measuring Children's Attitudes Toward TV Commercials," Journal of Consumer Research, Volume 3, (March 1977).

Rossiter, John R. and Thomas Robertson, "Children's TV Commercials: Testing the Defenses," Journal of Communications (Autumn 1974), pp. 137-145.

Rossiter, John R. and Thomas Robertson, "Canonical Analysis of Developmental, Social, and Experimental Factors in Children's Comprehension of Television Advertising," Journal of Genetic Psychology 129 (1976), 317-327.

Rust, Langbourne and Thomas Watkins, "Children's Commercials: Creative Development," Journal of Advertising Research, (1975), 15, 5.

Sheikh, Anpes, Prasad Kant, and Rao Tannuri, "Children's TV Commercials: A Review of Research." Journal of Communications, 24 (August 1974), pp. 126-136.

Ward, Scott, "Children's Reactions to Commercials," Journal of Advertising Research, 12, 2 (April 1972), pp. 37-45.

Ward, Scott and Daniel Wackman, "Family and Media Influences on Adolescent Consumer Learning." American Behavioral Scientist, 14, 3 (January 1971).

Ward, Scott and Daniel Wackman, "Children's Purchase Influence Attempts and Parental Yielding," Journal of Marketing Research, 9 (August 1972), pp. 316-319.

Ward, Scott, and Daniel Wackman, "Children's Information Processing of Television Advertising," reprinted from New Models for Mass Communication Research, Vol. II, Sage Annual Reviews of Communication Research, (1973), edited by Peter Clarke, pp. 119-146.

Ward, Scott, Daniel Wackman and Ellen Wartella, Children Learning to Buy: The Development of Consumer Information Processing Skills, Cambridge, Mass.: Marketing Science Institute (1976).

Wartell, Ellen and James Ettema, "A Cognitive Developmental Study of Children's Attention to Television Commercials," Communications Research I, 1 (January 1974).

Zuckerman, Paul A. and Mark E. Ziegler, "Children's Attention to Television and Memory of Commercials," Paper Presented at American Psychological Assn., (August 1977).

CHAPTER 2

A Study of Children's Defenses Against Television Commercial Appeals

JUNE ESSERMAN

JUNE ESSERMAN

A Study of Children's Defenses Against Television Commercial Appeals

SUMMARY

The study reported here was initiated by questions about whether young children can defend against the appeals of persuasive commercials; how well, if at all, they can resist these appeals, and how well they resolve the "cognitive dissonance" between the appealing product image conveyed by the commercial and their awareness of parental negative views about the product.

To study these questions an experiment was carried out with 204 children aged 5-8 who were shown a gum commercial for a popular sugared gum. 104 of these children were aware they were permitted by parents to chew only sugarless gums and 100 were children who were permitted by their parents to chew sugared gums.

Brand choices were asked before and after exposure to the commercial. In addition questions were asked about reasons for brand choice, rating of the appeal of the product seen in the commercial, and of the entertainment value of the commercial itself.

A comparison of the choices of the children permitted to chew sugared gums with those who knew such brands were proscribed showed strong ability of the latter group to resist the persuasive appeals of the commercial. There was some shift to increased choice of the brand in the commercial among those who generally chew sugared gums. Concern about parental sanction of the brand chosen was a major concern among those not permitted sugared brands.

There was evidence that one way children handle the potential frustrations of exposure to an attractive product which they know they should not choose is to deny the perceived appeal of the

product. The "cognitive dissonance" effects are resolved in the direction of lessening the perceived appeal of the product.

INTRODUCTION

There has been much concern expressed about whether younger children, by their very nature, are unable to resist or defend themselves against the highly attractive, persuasive appeals of television commercials. The colors, humor, special effects, sensory appeals, etc. . . . in short—all the attractive techniques of the visual arts are used in a commercial so effectively that adults wonder how a young child can resist these persuasive techniques.

In the process of testing commercials with young audiences, researchers at Child Research Service (CRS) observed that children did seem able to resist advertising appeals when youngsters were aware it is in their self interest to do so. For example, children were observed requesting or expressing a preference for a toy or treat they know is acceptable to their parents instead of the advertised brand they have just seen in a commercial test. Many appear to learn at an early age that they would rather accept a substitute product and receive parental approval than risk refusal and/or disapproval from the parent because of the nature of their request.

But how does the child handle this compromise internally? Are they as satisfied with the substitute treat? Does the highly attractive looking product or brand they see on the television screen become an alluring standard against which the parentally sanctioned product is unfavorably compared?

Conversely, does the child bring some defenses into play to avoid the frustration and potential unhappiness of such a situation? Observations of children suggests that when there is a marked disparity between the appeal of a product in a commercial and a child's awareness of parental disapproval of that product, the child reduces the tension on these conflicting forces by perceiving the product as less attractive. Studies of cognitive dissonance (Festinger, 1957; Brehm & Cohen, 1962) suggest that children as well as adults employ this mechanism to avoid frustration and cognitive tension.

To study the question of whether children can defend against the persuasive techniques of television commercials and how they do so Child Research Service designed and carried out the experiment described here.

Design of the Study

The overall design of the study called for a comparison of reactions to a gum commercial among children who are permitted to chew sugared gums with those who are only permitted sugarless brands.

The plan of the experiment also included an opportunity to learn from the youngsters the reasons for their brand choices and to test how children resolve the "cognitive dissonance" between their awareness of parental proscriptions against sugared gums and the persuasive, appealing image of a sugared gum presented in a television commercial.

The specific study design was as follows:

A total of 215 children 5-8 years of age were recruited, prescreened and interviewed within the following specifications: 106 children were from homes where the mother prohibits the child from chewing sugared gum brands, but allows sugarless gum brands; 109 children were from homes where the mother places no restrictions on gum brands the child uses.

The original screening procedure was done with mothers to determine the extent of their restriction or non-restriction of their child's gum chewing.

During the course of the interview, a verifying question was administered to determine whether each child understood mother's proscription regarding gum usage. Thus, the sample was reduced to include only those youngsters who corroborated mother's restrictions (or lack of restrictions) on chewing gum brands.

Primary analysis was conducted with a sample of 204 children who were aware of whether or not their parents permit them to chew sugared gums.

The characteristics of the 11 children who failed to meet the criteria of awareness of parental attitude toward the child's use of sugared gums were as follows:

- 6 were children whose mothers claimed they were only allowed to chew sugarless gum but the children were unclear about this proscription. Two were boys aged 5; one was a boy aged 6; and one was a girl aged 7.
- 5 were children whose mothers said they were allowed sugared gums but the children were not sure of mothers' views. Two were boys aged 5; two were girls aged 5; one was a boy aged 6.

SAMPLE
Age and Sex Distribution

	Chew Sugared Gums (104)		Chew Sugarless Gums (100)	
	Boys	Girls	Boys	Girls
5 years	10	10	9	11
6 years	14	15	13	13
7 years	13	14	14	14
8 years	15	13	14	12
	52	52	50	50

Each child was shown the same television cartoon program which contained two exposures of a commercial for a sugared gum brand (one at the beginning of the show and one at the end of the show). The commercial used in this study had been evaluated previously by the Child Research Commercial Testing Service and proved to be one which effectively communicated brand information to children and presented the brand in a positive and appealing way.

In the test situation the procedure used was as follows:

Children were escorted into the interviewing room individually. As they entered, they were shown a simulated store shelf on which packages of 2 popular sugarless brands and 2 popular sugared brands were displayed.

The child was then asked which brand they would most like to have that day when they left the test site with mother. Following exposure to the cartoon program with the sugared gum commercials, the child was asked a series of questions about the show and the commercial which included: (but not in this order)

- which of the 4 brands of gum on display was his/her final choice to take home when leaving with his/her mother
- his/her reasons for choice of the brand
- rating of the appeal of the gum advertised (how good it seems to be)
- rating of the appeal of the commercial itself (how much fun it was to watch)
- name of brand advertised

Questions about the sugar content of the gum advertised were omitted to avoid subtly pointing out a basis for their choice of

brand of gum. The gum advertised was a well established brand. It was assumed most children who chew gum would be familiar with it and the fact that it was a sugared gum.

The responses of those permitted by parents to chew only sugarless gums were then compared with those permitted the sugared gums.

Results

An examination of the pre-commercial choices of brand of gum to take home with the post-commercial choices shows a marked difference in the behavior of those permitted and those not permitted to chew sugared gums.

Among those permitted to chew sugared gums, the overwhelming majority chose one of the sugared brands both "Pre" and "Post" commercial (Pre 96% and Post 95%). The only sizeable shift

TABLE I
CHILDREN'S PRE- & POST-COMMERCIAL CHOICES OF GUM BRANDS

	Children permitted sugared gum (N = 104) %	Children not permitted sugared gum (N = 100) %
PRE-COMMERCIAL CHOICES:		
Sugared brands		
Brand in Commercial (A)	54	9
Other sugared brand (B)	42	10
Non-Sugared brands		
Sugarless brand (C)	3	49
Sugarless brand (D)	1	32
	100%	100%
POST-COMMERCIAL CHOICES:		
Sugared brands		
Brand A	63	9
Brand B	32	5
Non-Sugared brands		
Brand C	3	56
Brand D	2	30
	100%	100%

in choice was between the two brands of sugared gums with the brand in the commercial increasing by 9%. Thus the commercial seemed to be persuasive among those permitted to chew sugared gum. (See Table I.)

On the other hand, the commercial failed to persuade those not permitted sugared gums to choose the brand on the commercial. In fact combined choice of sugared brands following the commercial showed a small but not significant decrease from 19% to 14%. Before the commercial 8 out of 10 of these children chose a sugarless gum and after the commercial a similiar number persisted in choosing one of the sugarless brands. Among those not permitted to chew sugared brands the commercial may have been somewhat effective in maintaining brand loyalty since the other sugared brand lost 5% of those initially selecting it when these children made their post-commercial choice.

Inspection of the reasons given by the children for their post-commercial choices reveals that concern with parental views was a salient factor in both groups. It is not surprising that this concern was a more frequently offered reason among those not permitted to chew sugared gums (35%) than among the other group. Yet even among those permitted sugared gums about one-sixth gave as their reason "That's the kind my mother lets me have." (See Table 2.)

The main reasons for choice of brand by those who knew their parents objected to sugared gums reflected, in large part, a concern with the sugar content. 31% specifically mentioned concern about sugar and its effects.

By contrast, those permitted sugared gums offered as their reasons (besides parental sanction) "it's a favorite or well liked brand"; "It looks good on the commercial"; "Want to try it."

The children rated the gum in the commercial on a five point scale using as a series of stars because they were familiar with this non-verbal rating scale. The more stars awarded, the better the rating. In this experiment the highest rating a child could award the advertised brand was five stars and the lowest was one star. Past experience in using this scale with several thousand children in Child Research Studies has shown it to be a relatively reliable and valid measure of children perceptions of products and/or commercials. Table 3 presents the ratings children gave the product after seeing it in the commercial. Specifically they were asked to

TABLE 2
REASONS OFFERED FOR
POST-COMMERCIAL BRAND CHOICES

	Children permitted sugared gums (N = 104) %	Children not permitted sugared gums (N = 100) %
Reasons Given		
Mother permits it	17	25
Has no sugar	3	21
Other brands bad for teeth	—	10
Favorite/know it's good	28	19
Looks sweet/like sweet gums	14	—
Looked good in commercial	13	—
Want to try it	12	6
Wanted it (no explanations)	8	4
Other (liked shape, etc. . . .)	5	5

rate "What did you think of the gum in the commercial?"

Those not permitted by parents to chew sugared gums rated the advertised gum significantly lower than those who chew sugared gums. (47% vs 86%). It would seem that the product perceptions of those not permitted sugared gums are altered in the direction one would predict on the basis of theory of cognitive dissonance. The perceived appeal of the brand seemed to be modified to lessen the tension between pre-existing, proscriptions and brand choice. Specifically the children who knew they are not supposed to have the kind of gum that was shown in the commercial seemed, from their ratings, to perceive it as less attractive than did those who are permitted to use such products.

Children were also asked to rate the commercial in terms of "how much fun it was to watch." A comparison of the ratings of the two groups of children shows far less difference in their perceptions of the entertainment value of the commercial than in their perception of the appeal of the advertised product. A total of 82% of those who chew sugared gums gave the commercial 4 or 5 stars whereas 71% of those who do not chew sugared gums gave it this high rating. A difference of this magnitude is not statistically significant with samples of this size. (See Table 4.)

TABLE 3
CHILDREN'S RATINGS OF THE APPEAL
OF THE GUM SEEN IN THE COMMERCIAL

	Children permitted sugared gums (N = 104) %	Children not permitted sugared gums (N = 100) %
Ratings:		
5 stars	35	21
4 stars	51	26
3 stars	10	27
2 stars	6	19
1 star	2	7

It would appear that those who are not permitted to chew sugared gums do not have the same modifying effect on their perception of the entertainment value of the commercial as they have with regard to the perception of the product advertised.

DISCUSSION OF FINDINGS

The findings in this study provide evidence of children's ability to defend against the appeals of television commercials. The consistency of the data also contribute to the persuasiveness of the findings. Nevertheless, caution should be taken in drawing conclusions from one such experiment. Further research needs to be carried out using other types of products, different advertising appeals, different viewing conditions, etc. to clarify the limits and conditions of children's ability to defend against persuasive advertising.

Nevertheless, the findings indicate that the image of young children as defenseless, unthinking little people sitting in front of television screens and absorbing uncritically all messages and stimuli presented to them is clearly not a true or adequate picture of children's TV experience.

The data suggests that children have several defense mechanisms and call these into play when they are needed. For one, children prefer to get some type of treat rather than none at all and therefore tend to choose what they feel they are more likely to successfully obtain. Everyday experience with children provides examples

TABLE 4
CHILDREN'S RATINGS OF THE ENTERTAINMENT VALUE OF THE COMMERCIAL

	Children permitted sugared gums (N = 104) %	Children not permitted sugared gums (N = 100) %
Ratings:		
5 stars	43	33
4 stars	39	38
3 stars	15	18
2 stars	2	9
1 star	1	2

of this behavior. Children learn to focus their requests within the range of the "possible" when they clearly understand what types of treats are "possible". It is when the line between "possible" and "not possible" is neither clear nor consistent that children probably try for items sometimes considered "not possible" since the outcome is not a foregone conclusion.

Second, it appears that children's frustration with not being allowed to have a product shown as highly desirable is modified by the mechanism of cognitive dissonance which serves to lessen the attractiveness of the unobtainable product. If the child clearly knows a brand is proscribed and chooses another he has a need to deny the appeal of the advertised brand. Instances where this does not occur may be due to the child's lack of conviction that the product is not obtainable and that in fact, if he/she argues, persuades, entreats—the parent may give in and the child succeed in getting the product. Moreover, the parent may not have imparted to the child a meaningful negative view of the product but merely an injunction against its use. It may be that under such circumstances the perceived appeal of the product is less likely to be modified.

The results of this study also tend to underline the importance and strength of parental influence on the product and brand choices of young children. Findings that parental influence can outweigh the appeals of a TV commercial should come as no surprise when one compares the potential impact of the emotion-laden rela-

tionship of the parent and child with the impact of an impersonal instrument, albeit persuasive, like a television commercial.

Parents and possibly teachers (as the significant adults in a child's life) would seem to have both the power and opportunity to guide children's responses to advertisements. Encouragement of parents and teachers to do so would seem to be a promising and effective way to insure that children become intelligent consumers and discriminating TV viewers at an early age.

Conclusions

1. Children who are aware of parental proscriptions against use of sugared gums react differently to the persuasive appeal of commercials for such a product.
   - Those who know such gums are not approved of by their parents show an ability to resist the appeal of commercials and choose instead sugarless gums.
   - Those who ordinarily chew sugared gums shift their brand choice slightly in the direction of the advertised brand

2. There is evidence of cognitive dissonance effects on the perception of the advertised product in that those children who know their parents hold a negative image of sugared gums perceive the advertised gum less favorably than children who are permitted to chew such gums.
3. Perception of the entertainment value of the commercial is not affected by parental proscriptions against the use of sugared gums, suggesting that no defense against this attribute of the commercial is needed by children.
4. Awareness of and concern for parental attitudes figure importantly, particularly in the choices of those who choose sugarless gums. Even among those not restricted in their choice of sugared gums, parental attitudes are a factor in their choice.

REFERENCES

Adler, R.P. et al. Research on the *Effects of Television Advertising on Children*, Washington, D.C.: National Science Foundation, 1977.

Brehm, J.W. and Cohen, A.R. *Explorations in Cognitive Dissonance*, New York, Wiley, 1962.

Festinger, L. *A Theory of Cognitive Dissonance*, Stanford University Press, Stanford, California, 1957.

Festinger, L. and Allen, U. *Conflict, Decision and Dissonance*, Stanford University Press, Stanford, California, 1964.

Ward, S., Wackman, D.B. & Wartella, E. *Children Learning to Buy: The Development of Consumer Information Processing Skills*, Cambridge, Massachusetts Marketing Science Institute, 1975.

CHAPTER 3

Children's Perceptions of the Realism of Televised Fiction: New Wine in Old Bottles

HOPE LUNIN KLAPPER

HOPE LUNIN KLAPPER

Children's Perceptions of the Realism of Televised Fiction: New Wine in Old Bottles

The major reason for studying whether or not children perceive televised fiction as an accurate reflection of social reality has been the quite logical assumption that material perceived as realistic is more likely to influence a child's beliefs, role definitions, social expectations, and the like than is material judged as unrealistic. One of the major objectives of this study is to test this assumption.

The substantive content of this study centers on children's perceptions of the realism or unrealism of televised fiction (TVF).[1] The broader goal is further insight into the dynamic and complex interaction between the child and television and the role played by television in childhood socialization.

It is hypothesized that:

1. Children's replies to closed-end questions, at least in this topical area, are generally inadequate and misleading.[2,3]
2. Children can and do evaluate the realism of televised fiction (TVF).
3. Children's evaluations deal most often with small bits or elements of larger and more complex wholes (Flapan, 1963; Hartley, 1964; Leifer and Roberts, 1972; Noble, 1975).
4. Children do not make consistent, overall judgments of the realism of TVF.
5. Children's judgments of realism or unrealism are in accord with and in part a function of their cognitive abilities. The judgments are also influenced by and often based upon their own experiences with people and social institutions (Halloran, 1975; von Feilitzen, 1975; Brown, 1976; McCron, 1976; Sherkovin, 1976; Chandler, 1977; Comstock, 1978).
6. Since both second- and fifth-graders fall into Piaget's stage of concrete operations,[4] marked differences between the two

groups are unlikely. However, when differences do occur, fifth-graders should most often be somewhat more cognitively advanced.

7. The perceived realism of TVF is not an important determiner of the influence of TVF on children's views of the real world.
8. Children's views of the aspects of social reality studied here derive primarily from real life rather than TVF.

It is proposed that the consequences of televised fiction *for* a child are in part a consequence *of* the child. The term "consequence" rather than "effect" was chosen because "effect" is used so often in the relevant literature to mean, explicitly or implicitly, fairly simplistic cause - effect relationships (Brown, 1976). There is no way, of course, to know all the consequences of television for a child, nor the duration of each of the consequences, nor yet what is categorized and stored in which compartments of the child's memory, and in what form.

The key point is that the child is here viewed as a dynamic factor. In televiewing, as in all circumstances, the child helps *create* the environment (Brown, 1976; Chandler, 1977, Piaget, 1977). He or she brings to the televiewing situation an interest level, experiences with social reality, a cognitive stage and style. These, and other intervening variables, set the parameters of the child's translation of televised content, and the child, of course, responds to his or her translation of the content (Wiese and Cole, 1946; Klapper, 1969; Noble, 1975; Hawkins, 1977; Klapper, 1977).

METHOD—SAMPLE

Basic Method

The data derive from personal, one-to-one, standardized interviews with children in their schools, in playgrounds, parks, and homes. Each child was alone with the interviewer during the interview. Interviews varied in duration from 15 to 50 minutes.

The children were interviewed primarily by college students trained in interviewing children. Interviewing began in March 1977 and was completed in August 1977.

Coding was done by six experienced and specially trained coders, under the direction of a professional coding supervisor specially trained by the investigator. Double coding by random pairs

of coders on open-end items yielded reliability scores of .91 or higher.

Sample

The sample, in essence a stratified convenience sample, consisted of 88 second-graders aged seven or eight and 85 fifth-graders aged ten or eleven; it was designed to insure inclusion of a varied racial-ethnic mix as well as ghetto, middle- , and working-class children (Tables 1, 2). Fifty-three percent of the children were male and forty-seven percent were female. Social class was primarily determined by neighborhood; in some schools, teachers' classifications were used. The vast majority of the children lived in New York City, primarily in the Bronx, Brooklyn, and Manhattan. A few children lived in small cities in New Jersey.

Specific Procedures

The topics of inquiry were approached in several ways.

1. The children were asked to name realistic (i.e., "a lot like real-life") programs, and to indicate the ways in which the first program cited was realistic. Those who could name none offhand were asked about the realism/unrealism of "Happy Days" or "Sanford and Son," programs which most of them watched, and about a specific character in each. Probes were used to elicit the ways in which programs or characters were seen as like or different from real life.
2. The children were asked whether children depicted on TVF were like real-life children and whether fathers depicted on TVF were like real-life fathers. Probes were used to elicit the meaning and bases of the simple closed-end responses.

TABLE 1
RACE AND ETHNIC STATUS BY GRADE

Grade	White (N = 106)	Black (N = 26)	Hispanic (N = 34)	Oriental (N = 2)	Other* (N = 5)	Total (N = 173)
2nd	60%	14%	19%	2%	5%	100%
5th	62%	17%	20%	—	1%	100%
Total (N = 173)	61%	15%	20%	1%	3%	100%

*Includes American Indian and those few children whose race was not indicated on the questionnaire. Note percents add horizontally.

3. The children were asked about the gross incidence first on TVF, then in real life, of each of two patterns common to TVF: the perceptually obvious pattern that the police virtually always capture the criminals, and the abstract pattern (i.e., one requiring a higher degree of generalization or inference) that "good" people "almost always win" on TVF.

TABLE 2
SOCIOECONOMIC STATUS BY GRADE*

Grade	Low Income (Ghetto) (N = 41)	Working Class (N = 34)	Middle Middle (N = 63)	Upper Middle (N = 21)	Total (N = 173)
2nd	27%	18%	36%	15%	96%
5th	20%	21%	37%	9%	87%
Total* (N = 173)	24%	20%	36%	12%	92%

*Omitted are 8% of the children about whom there were no social class-income data. Note percents add horizontally.

The children were further asked for the bases of some of their beliefs about life in relation to both patterns.

IS TELEVISED FICTION A LOT LIKE REAL LIFE – YES OR NO

The first and broadest question about TVF asked, "... can you think of two or three [television] shows that are a lot like real life?" It was assumed, on the basis of pretests plus informed judgment, that the phrasing (i.e., "can you think of" versus "are there any") plus the request for "two or three" placed some mild pressure on the child to think of at least one or two realistic programs.

Somewhat over half (57 percent) of the children answered affirmatively and cited one or more programs. Fifth-graders were considerably more likely (67 percent) to say "yes" than were second-graders (48 percent) (see Table 3). Seventy-four children could think of no program that was "a lot like real life," and they were therefore asked if they watched "Happy Days" or "Sanford and Son." All but four children did watch at least one of these

programs, and the viewers were asked if one of the two programs "is a lot like real life." About half of the children in each grade (55 percent and 54 percent respectively) replied affirmatively; almost half replied in the negative. Thus virtually all children readily answered the closed-end "yes"—"no" questions.

TABLE 3
PERCENT OF CHILDREN PERCEIVING AT LEAST ONE TVF PROGRAM AND EACH OF TWO SPECIFIC ROLES AS IDEALISTIC

Aspect of Television Judged as Realistic	2nd Grade (N = 88) %	5th Grade (N = 85) %	Total (N = 173) %
At least one program	48	67	57
TV children	36	34	35
TV fathers	49	42	46

In order to increase the depth and breadth of the children's replies, all were queried about two very familiar roles, TVF children and TVF fathers. In these two closed-end questions,[5] somewhat fewer than half (46 percent) of the children said fathers were realistically portrayed on television, and only a third (35 percent) said

TABLE 4
PERCENT OF CHILDREN RATING TWO SPECIFIC PROGRAMS AND TWO SPECIFIC CHARACTERS ON TVF AS REALISTIC

Aspect of Television Judged as Realistic	2nd Grade (N = 44) %	5th Grade (N = 26) %	Total (N = 70) %
"Happy Days"/ "Sanford and Son"*	55	54	54
"Happy Days" (N = 50)	53	44	50
"Sanford and Son" (N = 18)	63	70	68
Cunningham/Lamont	61	62	61
Cunningham (N = 50)	58	56	58
Lamont (N = 18)	75	70	72

*"Happy Days" was selected because it had a large child audience. "Sanford and Son" was selected because Greenberg and Reeves (1976) questioned their sample about that program. The disparity in the number of children asked about each of the two programs was in part the result of interviewers asking about "Happy Days," the first mentioned program, if a child watched both.

children on television were like themselves and their friends.[6] A variety of meanings are subsumed by the simple words "yes" and "no."

THE ACTIVE, EVALUATING CHILD AUDIENCE

Much of the existing literature on children's perceptions of the realism or unrealism of TVF appears implicitly to assume that a child's beliefs on this subject are consistent. Such literature also appears to assume, quite logically, given the first assumption, that a child's beliefs regarding the realism of TVF can be adequately tapped by questions on almost any two or three aspects of TVF (e.g., Dominick and Greenberg, 1970; Greenberg and Reeves, 1976; Comstock, 1978). However, both Reeves, 1977 and Hawkins, 1977 disagree, in differing ways, with these assumptions. The data permit the testing of these assumptions.

A related issue is what children of these ages mean when they agree (or disagree) that some element of TVF is like real life. The existing literature often assumes that a child's "yes" or "no," "agree" or "disagree" replies reflect a broad, thoughtful, overall and on-balance assessment (e.g., Comstock, 1978; Office of Child Development, 1972). The data here permit the testing of this assumption as well.

Consistency Versus Independent Judgments

Each child had from three to five opportunities (see Tables 3 and 4) to term some aspect of television like or unlike real life. All were asked to cite one program which was "a lot like real life," and to compare TVF children and fathers with real children and fathers. In addition to these three opportunities, children who could cite no realistic program were asked about the realism of a specific program and of a character on that program. Each "like" reply was scored 1 and each "different" reply was scored 2. The scores for each child were summed and divided by number of questions answered, yielding a final Like-Different score ranging from 1 (*all* replies "like real life") to 2 (*all* replies different from real life). Roughly half the children (51 percent) scored between 1 and 1.5; 49 percent scored between 1.6 and 2. A Like-Different dichotomy was created by using 1.5 as the cutting point of the distribution. Second-graders were no more likely than fifth-graders to rate programs or elements as being like real life. Only 10 percent of the

total sample consistently (i.e., at every opportunity) chose the "like real life" response; 7.5 percent consistently selected the "unlike" response.

The small percentages at the extremities of the distribution indicate the TVF was not perceived as being inherently or consistently realistic or unrealistic by the large majority of the children. More than 8 out of 10 of the children thought some aspects of TVF were realistic and some were unrealistic, i.e. they made independent judgments about each aspect of content about which they were queried.[7] Thus, it is hazardous to generalize from the perceived realism of one TVF element or character to the perceived realism of other elements of TVF. It is equally hazardous to generalize from judgments of one segment to judgments of TVF as a whole.

Although this may appear startlingly flexible and mature for children of these ages, it is actually quite predictable. Research on children's learning (Collins, 1970; Katzman, 1972) and their perceptions (Flapan, 1968; Leifer and Roberts, 1972; Klapper, 1977) and Piagetian theory (Piaget, 1953; Bruner, 1974; Chandler, 1977) indicate that children of these ages tend to perceive discrete, literal, and often peripheral or trivial bits rather than organized complex wholes. What might be deemed evidence of maturity may well indicate instead that for these children a specific role, character, or program—or TVF itself—was not yet a conceptual whole. In short, it may be that generalizing about complex wholes is not yet in the repertoire of these second- and fifth-graders, at least in relation to the topics tested. In any case, *assuming that children have a set of systematic and generalized beliefs about the overall realism/unrealism of TVF appears to be both unwise and unproductive.*

Like or Unlike Real Life: Broad Generalizations or Small Specifics?

What do these second- and fifth-graders mean when they say something on television is or is not like real life? To test the validity both of closed-end questions about the realism/unrealism of TVF and of assumptions about children's cognitions underlying such questions, this study followed closed-end questions with at least one open-end question, e.g., "Do you think ('Happy Days'/'Sanford and Son') is a lot like real life? What are some of the things in it that are (are not) like real life?" "What else is (is not) like real life?" Whether speaking of the similarities or differences between TVF

and real life, the children in both grade groups most often cited concrete, literal, and limited parts of the whole under inquiry. They tended to mention discrete traits and behavior rather than motives, value patterns, or gratifications. Fifth-graders somewhat more often than second-graders cited less superficial and broader similarities and differences and somewhat more often cited social interactions.

Following are some typical responses of second- and fifth-graders to the questions "What are some ways (*child's choice of realistic program*) is like real life? What else in (*program name*) is like real life?"

Second-Graders

"Brady Bunch": "They are a family with kids. They have a house. The kids go to school."

"I Love Lucy": "She had a baby. She cooks. Ricki always yells at her."

"Emergency": "People on the show help people put fires out; help out people."

"The Rookies": "They're policemen. They dress like cops."

"The Partridge Family": "They live in a family—all in the same house. They play music."

Fifth-Graders

"The Jeffersons": "There is a mother, father, son, and a maid. The son goes to college and the mother takes French class."

"All in the Family": "Some people criticize people like he does."

"Emergency": "They show how para-medics work. They use real kinds of accidents."

"Brady Bunch": "I know a lady who had children who married a man with children. It's my mother's friends."

"Baretta": "He's like a policeman and he tries to save people and policemen are real. He's like a crime fighter and a good policeman."

"Adam 12": "Policemen driving around to answer calls which

is part of real life. The calls that they answer to is things that happen every day."

Children who failed to cite at least one fictional television program which was "a lot like real life" were asked their views of the realism of "Happy Days" or "Sanford and Son." Following are some ways that these programs, or a character on these programs were cited as like or different from real life.

Second-Graders
"Happy Days"

(Like) "They go to school. The children get in trouble."
(Like) "They are a family. They rent out their spare room. They love one another."

(Different) "When at the derby, people didn't get hurt; in real life they would. The clothes."
(Different) "They don't wash clothes or mop floors."

(*Like—Mr. Cunningham*) "He's nice. He doesn't get mad that much. Sometimes fathers are fat like him."

(*Different—Mr. Cunningham*) "He always says yes. He's too fat."
(*Different—Mr. Cunningham*) "He never gives Richie any money. He always comes home complaining."

"Sanford and Son":

(Like) "Because there's a lot of arguing. There's a father and an aunt arguing."
(Different) "There was an earthquake on Sanford and Son."

(*Like—Lamont*) "Black guys tries [sic] to stop fights. Lamont tries to stop fights between his father and the old lady."

Fifth-Graders
"Happy Days":

(Like) "They have fun. They go to school. They dance."
(Like) "They live in a house. They work. The kids have fun."
(Like) "Problems happen. People ride motorcycles. Kids get into trouble. Kids do homework."

(Different) "Everything is too happy. You know, they always

have a good time. Fonzie doesn't seem real."
(Different) "Men snap their fingers and women run to them. A person can hit a machine without paying and it works. Men are like heroes and women are like slaves. People don't walk around in T-shirts and jackets snapping fingers, being cool."
(Different) "The things that happen in it are planned. Like when Fonzie got hurt in the crash he wasn't hurt bad, but in real life he'd probably be killed. The kids always in the soda shop. They never seem to work at all. All they're worried about is girls, girls, girls."

(*Like—Mr. Cunningham*) "He has children. He goes bowling."

(*Different—Mr. Cunningham*) "He's too nice to all the kids."

"Sanford and Son":

(Like) "There is a father and a son. There isn't a mother. They live together and discuss things."
(Like) "The people work. Relatives come over a lot. The father yells at the son."

Qualitative analysis of replies to the open-end questions indicates that "yes" or "no" answers to the questions do not often indicate an "on balance" judgment of the overall realism or unrealism of a program or character. On the contrary, the children, and particularly second-graders, were most often judging on the basis of limited and often superficial details.[9] They frequently commented on physical appearance or simple behaviors (e.g., "They look like us," "They can swim"), rather than on motives, values, goals, or interpersonal relations. In short, the bases for the children's judgments were often trivial.

However, even when the children's comments are limited and trivial, they are generally *correct*. Facts can be both trivial (peripheral) and correct. What these second- and fifth-grade youngsters cited as realistic generally is realistic. And what they cited as unrealistic most often is unrealistic.

It would appear thus far that, at least with child respondents, and in this complex area, reliance solely upon closed-end questions can be misleading. Children's readiness to comply with requests and answer questions insures that most closed-end questions *do*

"work." But "working" here may mean only that they elicit replies easily handled statistically.

Judgment About Familiar Topics

In an attempt to maximize the likelihood of broad generalizations meaningful to adults, the children were asked about two very familiar topics, fathers and children. On these topics, once again, the open-end probes elicited citations of a veritable host of normal, often trivial, and generally undramatic events, details, and behaviors in daily life. The bases for judgments about TVF children differed little in nature from those cited for judgments about programs as a whole.

TVF Fathers: Second-Graders

About half of the second-graders judged the realism of TVF fathers (and TVF children as well) on the basis of discrete, limited, literal details.

> *(Like)* "Fathers have jobs. They eat the same things."
> *(Like)* "They go to work. They help clean the house and cook."
> *(Like)* "They work. They cook. They know how to swim. They know how to drive a car."
>
> *(Different)* "Fathers on TV are nice looking. They comb their hair nice. Some have nice moustaches and dress nice. They talk nice to children."

In regard to TVF fathers, but *not* in relation to TVF children or programs, about half of the second-graders, and a larger proportion of fifth-graders, noticed and described more socially meaningful behavior and patterns. The reasons for this difference are not apparent. The two aspects of fathers most often mentioned by second-graders are how they handle misbehavior in children, and the amount of time they spend with children. Comments on both of these aspects give one the flavor of the child's relationship with his/her father, or of father-child relations the child sees among friends. Work is often mentioned, and is sometimes cited as the reason why real fathers spend less time with their children.

> *(Different)* "They don't have to work too hard. They have a lot of time to play with their children."

(Different) "They act nicer, funnier. Too nice all the time."

(Like) "They spoil their children."

(Different) "They [real fathers] don't do the same things. You know, like staying home so much and kissing their women. TV fathers do that a lot."
(Different) "They don't yell enough. They don't hit their kids. They don't get drunk."
(Different) "They don't yell a lot. They're always there when the kid needs them. They hardly ever go to work."

(Like) "They punish the children when they're bad. When they are good their father takes them out. When they don't know where their children are they get upset. Fathers get aggravated when they are busy and the kids interfere."

A handful of second-graders note that television fathers are actors, follow scripts, or are different because they play the part.

(Different) "They are actors, they are funny and make us laugh. They do things that no other father can do."

In sum, about half of the second-graders describe socially meaningful traits and patterns and a number of them seem somewhat more insightful and mature here than in their comments on programs or children. However, at least half reply here as they did earlier and remain typical of what Piaget calls "concrete operational" children.[10]

TVF Fathers: Fifth-Graders

Fifth-graders speak about TVF and real fathers in more meaningful and insightful terms than do second-graders. But there is a minority of fifth-graders who remain limited and literal, while others are somewhere between the two.

(Different) "TV fathers don't smoke."

(Like) "They work. They get mad. They don't smoke."
(Like) "They watch baseball games. They have children. They play games."

The simgle most commonly used word *seems* to be "yell." The most common patterns cited are the handling of child misbehavior and the overall pattern of being nice-kind-loving. By and large, the

fifth-graders saw and cited patterns of more varied depth (e.g., they more often made inferences), breadth, and topic than did the second-graders. Consequetnly, many of them, in these replies, sounded somewhat more mature and perceptive than they did when speaking of TVF programs, specific TVF characters, or TVF children.

(Different) "They solve problems right away. They have lots of free time. They don't yell."

(Like) "They care for children, talk to children, show them they love them. Hug them."

(Different) "Very understanding. They don't yell at the kids like most fathers do."

(Like) "They tell kids what is right and what is wrong."

(Different) "They never really yell at the kid. You never see them at work. They're always happy."

(Different) "You don't see real life happenings. They never have problems with cars and houses. They rarely punish their kids."

(Like) "They always make right discussions [sic]. They deal with problems. And they know how to treat their kids."

(Different) "They are usually very happy with their life as it is, don't usually seek to change it. They are too energetic. They work all day and then come home raring to go."

(Different) "They never get hurt at work and if they do they always get better. They don't yell a lot."

(Like) "Very strict, very gentle like real fathers. Because they [script writers] take it from real fathers. They get opinions like you're doing."

In sum, even on very familiar topics (fathers, children) the "yes" or "no" answers mask wide variations in dimension, depth degree, topic, and overall nature of the similarities and differences cited. Perhaps the most precise interpretation of the "yes" or "no" answers is that they indicate whether or not the children found TVF to be like or unlike real life in some unknown, unpredictable ways or, often, in very specific, limited, and sometimes trivial ways.

PATTERN PERCEPTION AND PERCEIVED REALISM

Children's perceptions of the realism or unrealism of TVF were approached in a second way. Children were asked about the broad incidence of each of two patterns, first on TVF and then in real life: whether "the good people mostly always win," and whether the police usually "catch the criminals." Both are common "messages" (often considered the hidden agenda) in our legends, our folklore, and our media.

In addition to specific roles or programs, patterns were chosen for both scholarly and policy reasons. Social learning theorists (e.g., Laughlin, Moss, and Miller, 1969; Lamal, 1971; Denny, 1975) as well as Piagetians (e.g., Chandler, 1977) predict that children of these ages, particularly the second-graders, would be unable to perceive abstract patterns. Yet a major concern about children and television is that children of these ages *will* perceive patterns, including patterns judged undesirable by some adults, and that children will generalize perceived patterns to real life.[10] Perception of undesirable patterns, some people fear, might at the very least result in an undesired (and/or warped) view of social reality. At worst, it might ultimately lead to undesired values and behaviors.

Keeping in mind these fears, the social policy context, and the substantive findings thus far, we now turn to an examination of pattern perception and to self-reported sources of children's beliefs about the real world.

Judgment of Realism: Virtue Victorious

Children were asked, "In TV shows, do the good people mostly always win?" They were next asked, "How about in real life—do the good people mostly always win?" Finally, they were asked, "How do you know?" These questions, very simplistic in adult terms, deal with the most abstract of our topics. No clear and explicit referent was provided for "good people"; the child could have taken "win" literally or figuratively. In essence, the questions ask whether, on television and in real life, there is an over-all pattern of justice prevailing, of hard work winning out, of overall fairness.

A large majority of the children (84 percent) indicated that the good people usually won on TVF, and the variation by grade was insignificant (81 percent, 88 percent). The remaining children did

TABLE 5
DO THE GOOD PEOPLE MOSTLY WIN . . . ?

Response	On TVF						In Real Life					
	2nd		5th		Total		2nd		5th		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Yes	71	81	75	88	146	84	40	45	26	30	66	38
No	17	19	10	12	27	16	48	55	57	71	105	61
N.A.									2		2	1
	88		85		173						173	

not agree with the majority. A markedly smaller proportion of the group (38 percent) stated that the pattern applied to real life, and fifth-graders (30 percent) were somewhat less often optimistic and more often skeptical than were second-graders (45 percent). (See Table 5.)

In short, most of the children saw something, some pattern of events on TVF which they said did *not* occur as often in real life. And TVF was not only different from real life; it presented a more just and equitable world.

Judgments of Realism: Police Catch Their Quarry

In contrast to the first pattern, the second pattern—whether or not police generally catch "the criminals"—is both explicit and literal. The referents are explicit: police, criminals. And "catch" is literal. The children were asked, "Do you think the police almost always catch the criminals on TV?" They were next asked, "How about in real life?" ("Do you think the police almost always catch the criminals in real life?") The last two questions on the topic were, "Do you think they catch them more often on TV or in real life?" "How

TABLE 6
DO POLICE "ALMOST ALWAYS CATCH THE CRIMINALS . . . "?

Response	On TVF						In Real Life					
	2nd		5th		Total		2nd		5th		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Yes	67	76	76	90	143	83	42	48	23	28	65	38
No	21	24	8	10	29	17	45	52	60	72	105	62
Other and N.A.			1		1		1		2		3	
Total	88		85		173		88		85		173	

*Percents based on the total "yes" and "no" answers; "other" and N.A. omitted from base.

do you know they catch them more (less) in real life?"

The large majority (90 percent) of the older children, and three-quarters of the second-graders, stated that the TVF police were "almost always" successful (see Table 6). A smaller proportion of both groups said the pattern applied to real life. Second-graders (48 percent) were markedly more often sanguine than were fifth-graders (28 percent). When the children were asked to compare the TVF and real-life pattern directly, the majority of both groups (see Table 7) found the TVF pattern unlike and generally safer than real life. Here again the younger children were more often optimistic.

Pattern Perception: Virtue Victorious

Responses to the closed-end question on good people winning on TVF suggest that the large majority of children in both grade groups perceived a complex and abstract TVF pattern. But, as has been demonstrated, replies to closed-end questions alone are often misleading. Even though this pattern is discussed and experienced in many of life's arenas, from Sunday school to the dinner table, and even though the moral is sometimes explicitly drawn for the child, the children's replies nonetheless remain surprising (Sigel, 1964; Piaget and Inhelder, 1969; Hoffman, 1977). Recognition of this pattern on TVF requires broad generalization from many concrete and different cases to an encompassing abstraction, a theoretically unlikely capacity for most of these youngsters. And the abstraction in turn must be used in judging and categorizing familiar and unfamiliar behaviors.

Data derived from an open-end question help to clarify the issue. It will be recalled that all children were asked, in reference to good people winning in real life, "How do you know?" Their replies raise questions about the nature of the pattern perceived and the

TABLE 7
POLICE CATCH CRIMINALS MORE OFTEN

Response	Grade 2nd %	5th %	Total %
On TVF	65	86	75
In real life	34	14	24
Same in both	1	—	1
Total	(88)	(85)	(173)

frequency with which the pattern was in fact seen.

In both grade groups, some replies suggest perception of no pattern at all, while others suggest that the broad abstract pattern was translated into one which was narrower, more literal and, in some cases, highly idiosyncratic or egocentric. However, a good number of examples offered by children from both grade groups indicate, or at the least strongly suggest, that those children *did* perceive the abstract pattern. Their examples more often pointed out that the "bad" people weren't always caught or punished rather than that the good people triumphed. (Perhaps their interests and experiences make the fact that bad behavior is often unpunished more salient and more personally relevant than the rewards of virtue.) The examples often refer solely to whether or not police catch criminals, a predictable and narrow, more concrete interpretation of the broader pattern.

Second-Graders

(Yes) "Cuz when I'm good, most of the time I don't get into trouble and I can play and watch TV."

(No) "They would have told me in the newspapers if good people win."

(Yes) "I think the news tell [sic] you."

(No) "I be good and study hard and still I get the answers wrong."

(No) "Sometimes when my sister does something to me and I hit her back, I get into trouble."
(No) "Because good people do not carry weapons and so they have to give in to the bad people. My uncle's store was robbed and he had to give them money because they had a gun."
(No) "I saw bad people steal and fight in school. Nothing happened. They got away."
(No) "My big brother says that the bad guys usually win. Like during the blackout, a kid I knew stole a new bike, which was bad. But now he has a new bike and I don't."

Fifth-Graders

(Yes) "They play fair. And people who play fair usually win—

at bazaars, when people put money down. If they don't cheat, they win."
(No) "My little sister takes $10 in food stamps from my mother and gets away with it and she tells on me and I always get caught."
(No) "Sometimes my brother does something wrong and my father hits me. Just because I am the oldest."

(Yes) "Once I lost my camera in gym and someone found it and gave it back."

(No) "In school, kids get into trouble when they really aren't doing anything wrong."
(No) "The bad people have more ammunition and they have more guns than the good people. Good people don't go around looking for trouble. Bad people do."
(No) "If someone is having a fight on the street the one who's right doesn't always win. The strongest one wins."
(No) "I see it on TV. The news is always full of unsolved crimes. Lots of good people lost out during the blackout when the stores were robbed. I saw them breaking windows so they could get in."
(No) "On the news. The .44 calibre killer's still on the loose and they have been trying to catch him for a long time."

Pattern Perception: Police and Their Quarry

The second pattern, whether or not the police "mostly always" catch the criminal, is more explicit and literal than the first pattern and is the kind of concrete pattern children of these ages are generally able to perceive.

In two sets of data (see Tables 6 and 7), the majority of both grade groups said the pattern of police catching their quarry was more common on TVF than in real life. Examination of responses to the open-end probe indicate this is one case where the "yes" or "no" answers were valid. Because the question was phrased in specific and literal terms, the range of interpretation was comapratively narrow. The children were indeed talking about the incidence of police catching criminals, and a few explained why police have to succeed on TVF: "They have to come back next week"; "On TV they pretend they don't know what will happen."

SOURCES OF BELIEFS ABOUT REAL LIFE

For each of the two patterns discussed above the question order was designed to make TVF salient and thus increase the likelihood that TVF might be cited as a source of knowledge about real life. The police efficiency pattern was selected in part because while children have few, if any, personal experiences, they have a host of TVF experiences with police catching criminals. Thus, both question order and pattern selection theoretically increased the likelihood that the children would use TVF to explain/justify their beliefs about real life.

The sources of belief cited by the child, of course, are not necessarily the child's actual sources; however, sources cited are here used as an index of the *kinds* of sources perceived by the children as legitimate and appropriate for the topic in question.

Children's replies to the "How do you know?" question were coded by explicit source of information cited. The categories were as follows:

1. Real life (personal experience of self or others known to self, being told by family members, news, newspapers, television or radio news).
2. Televised fiction or "television" (not further specified). Each of the small number of such cases *could* refer to either television news or fiction because the reply "television" was not further probed by some interviewers.
3. Other and unclassifiable. Replies in this category are generally simple assertions of how life is, with no source or explanation offered, e.g., "The bad people have more ammunition and they have more guns than good people. Good people don't go around looking for trouble. Bad people do."
4. "Don't know" or "No answer."

In discussing their sources of knowledge, the vast majority of children in each grade group cited "Real Life" sources (see Tables 8 and 9) as the basis for their beliefs about real life. Only among second-graders in regard to police catching criminals did fewer than 90 percent of the children cite real-life sources, and even in that group, for that topic, the percent was 87. *Thus, even on a topic where children had little if any personal experiences, their view of the appropriate, relevant source was most often real life itself, not televised fiction.* However, 17 percent of the second-graders on this topic cited TVF or "television" (not further specified) either alone

TABLE 8
PROFERRED SOURCES OF INFORMATION ABOUT REAL LIFE BY TOPIC AND GRADE*

TOPIC	Grade 2								Grade 5							
	Real Life		TVF and TV (unspecified)		Other, etc.		D.K. N.A.		Real Life		TVF and TV (unspecified)		Other, etc.		D.K. N.A.	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Fathers	81	93	11	13	—	—	1	1	75	91	8	10	—	—	3	4
Good people win	76	90	12	14	5	6	4	5	73	91	9	11	5	6	5	6
Police catch criminals	75	87	15	17	3	3	2	2	78	92	7	8	3	4	—	—

*Percents based on number of children minus "Don't know" and "No answer."

Rows add horizontally. Number of responses is greater than number of children because some children gave more than one answer. Multiple answers were primarily from children who cited both TVF and real life sources; they were more often second graders.

or in conjunction with a real-life source.

Second-graders relied more often on personal experiences than did fifth-graders; fifth-graders more often than second-graders cited the news. However, a number of the younger children named the news, and personal experience continued to loom large among fifth-graders.

It would seem that for many of these youngsters, the hallmark of reality remains what they themselves have experienced, a phenomenon well in accord with the egocentrism of children of these ages.

Children who used TVF to describe real life constitute a small and very mixed group. A number of them cited both real life and TVF. (See Totals in Table 9.)

> "I was watching TV, every episode they were catching criminals. In the newspapers they catch them too, but they escape."

A few spoke only of TVF but were implicitly comparing TVF with real life.

> "TV fathers can't hit their children. Well, they could but I don't think it's good to see it."

A few said, in essence, "TV is pretend" and didn't discuss real life at all. For a few children, television was very salient and they continued to talk about TVF, perhaps perseverating. And a small group of children were probably genuinely confused by the "How do you know?" questions. Using TVF to describe social reality might signal misunderstanding of the question, might indicate the children failed to distinguish between TVF and real life, or might indicate those children believed TVF accurately mirrors real life.

PERCEIVED REALISM OF TVF AS AN INTERVENING VARIABLE

Children's perceptions of the realism/unrealism of televised fiction (TVF) are frequently assumed to act as an intervening variable in a television-child effects process (Greenberg and Dervin, 1970; Noble, 1975; Ryan, 1976; Greenberg and Reeves, 1976; Hawkins, 1977; Comstock, 1978). And the assumption, in turn, largely served to focus research on ways to measure whether or not television was seen as being like real life. Reeves (1977) going beyond description, tested the relationship between perceptions of the realism of tele-

vised fiction (TVF) and children's prosocial and antisocial behavior. Reeves concludes that the data "are not supportive of the assumed role of perceived reality in determining the impact of . . . TV on children's social behavior." The limited techniques of measurement used,[11] however, do not wholly rule out some relationship between children's views of the realism of TVF and their role definitions, beliefs, or behavior.

Some of the data of this study can be used to address the issue of whether or not perceived realism of TVF functions as an intervening variable.

It will be recalled that all children had from three to five opportunities to judge some aspect of TVF as like or unlike real life. On the basis of these answers, Like-Different scores were computed for each child. For three topics (fathers, good people win, police catch criminals) the children's sources of judgment about real life were run by their Like-Different scores. The sources cited, for each of the three topics, did *not* vary meaningfully by Like-Different score, thus supporting Reeves's (1977) conclusion that perceived realism of television does not function as an intervening variable (see Table 10). However, a stronger test would use more judgments and would test a wider range of topics. The fact that the very large majority of children cited real-life sources of course decreases the possibility that any meaningful differences could be found. The findings are interesting, provocative, strongly suggestive, but not conclusive. The topic clearly warrants further study.

The Fictional Nature of Television

Nowhere in the interview were children asked whether the programs and characters being discussed were fictional. However, roughly a third (38 percent) of the second-graders and 6 out of 10 fifth-graders (61 percent) spontaneously commented on the fictional nature of television. These children knew the people were actors who were told what to say and do on TVF. Several gave quite knowledgeable comments on actors and scripts, and a few explicitly noted that the end of the program is preordained. Examples of such comments follow.

Second-Graders

"You know they're playing roles. They are just actors."

"They're movie stars. They talk from a piece of paper and they dress up."

TABLE 9
PROFERRED SOURCES OF INFORMATION BY TOPIC

Topic	Real Life		TVF and TV unspecified		Other Unclassifiable		Total*	
	#	%	#	%	#	%	#	%
Fathers	156	92	19	11	—	—	169	103
Good People Win	149	91	21	13	10	6	164	110
Police Catch Criminals	153	89	22	13	6	4	171	106

*Total number equals all respondents minus those 15 who were "D.K."-"N.A." Percents add to over 100 due to multiple answers, most often second-graders citing both TVF or "television" and "Real Life."

"They act dumb. They have dumb parts in the script."

Fifth-Graders

"The things that happen in it are planned. Like when Fonzie got hurt bad but in real life he probably would have been killed . . . "

"The are movie stars, we aren't. They fight every day. I don't fight every day. They're older than me, fatter."

"Well, in one way they are different—they're movie stars. And in other ways—some of them are singers and we're not singers. But some of them *act* like real life . . . " [italics added].

"They're actors, and they act. They're faking it when they do a show. It's not like they really are. They're told what to say."

These children had no difficulty separating fiction from reality. They understood the make-believe nature of TVF, yet were also

TABLE 10
PERCENT CITING REAL LIFE SOURCES BY LIKE-DIFFERENT SCORE

S/D SCORES	TOPIC Real Fathers	Good People Win in Real Life	People Catch Criminals in Real Life
Same	91%	88%	89%
Different	89%	85%	88%

able to discuss the realism and unrealism of fictional programs and characters. The fact that a majority of both age groups chose real life as the appropriate source of information about real life further supports this generalization.

CONCLUSIONS

1. Children of the ages studied can and do make judgments about the realism of TVF.
2. Children of these ages rarely make holistic or "on balance" judgments about the realism of televised fiction. Simple "yes" or "no" answers generally refer not to broad topics or issues but rather to specific, literal, limited, and often trivial details.
3. Although the details commented on are often simple and trivial, they are generally correct. The children's literalism limits their translations of content or characters as a whole; it also tends to insure accuracy.
4. Children of these ages do *not* perceive televised fiction as being inherently or consistently realistic or unrealistic. The children instead judge separate bits individually. Thus, one cannot validly generalize from the perceived realism of one element to another or to the perceived realism of TVF as a whole.
5. Even on very familiar topics, the children perceive and judge fragmentally, episodically. Closed-end questions elicit replies which mask wide variations in dimension, degree, breadth of focal details, and overall nature of the similarities and differences perceived.
6. Existing studies on children's perceptions of the realism of televised fiction often rely entirely on closed-end, short answer questions. To the extent that they do so, their findings are in varying ways inadequate and at times misleading.
7. Two patterns common on televised fiction were selected for study: one was an abstract pattern, the other an explicit and literal pattern. Both patterns were seen by the children as more common on televised fiction than in real life. However, in relation to the abstract pattern, the children's terse answers to closed-end questions masked a wide range of interpretations and translations. While some children seem to have perceived the abstract pattern, a large proportion translated the abstract pattern into a more limited and literal version, with some

children remaining firmly tied to their egocentered world. The children by and large did see the more literal pattern.

8. In general, and without holding constant for the varying forms of the patterns perceived, the children, in reference to the two patterns tested, viewed the world of television as the happier, more just, and safer world.
9. Self-reported sources of information about real life were used as an index of the kinds of sources which were perceived by the children as legitimate and appropriate indicators of the nature of real life. Televised fiction does not appear to be serving as a major socializing agency for these two patterns. Rather, real life (as personally experienced, as told them by friends, as learned from the news) is clearly the more dominant influence. Nine out of ten children in each grade group cited one or more of these real-life sources as a basis for their belief.
10. On the basis of unsolicited, spontaneous comments, at least a third of the second-graders and at least two-thirds of the fifth-graders were found to be fairly too highly sophisticated in their understanding of the nature of TVF, i.e. they knew about actors, scripts, plots, and a few were explicitly aware that in televised fiction, the end is preordained. These children were able to judge the realism of televised fiction while well aware that what they were judging *was* fiction.
11. The data do not uphold the assumption that perceived realism of TVF is an important determiner of the influence of TVF on children's views of the real world.
12. The differences in the children's perceptions of the televised patterns did not derive solely from television itself. The children's perceptions of the televised patterns varied, and that variation was in part a product of cognitive style. However, cognitive style is not the only element of the process which derives from the child. A number of social institutions and a wide array of personal experiences are active here and, indeed, were explicitly cited by the children. The consequences of television *for* the child was in part a consequence *of* the child.

FOOTNOTES

1. A number of researchers in this area make no clear, consistent distinction between "true," "realism," "reality," "real" (Noble, 1975; Lemon, 1976; Korzenny, 1976; Greenberg and Reeves, 1976; Reeves, 1977; Hawkins, 1977). This study dealt with the realism or unrealism of televised fiction as perceived by second- and fifth-graders. Realism here means simply and consistently "like real life."
2. Since the study dealt with second- and fifth-graders, the term "children," when not further qualified, refers exclusively to children of these grades.
3. See Schuman and Presser (1978) on the relationship between replies to open-end versus closed-end questions among adults. See Vaillancourt (1973) re stability of children's survey responses.
4. See Flavel, 1963; Piaget and Inhelder, 1969; Wackman and Wartella, 1973; see also a terse description of children in this cognitive stage in Klapper, 1977. According to Piaget, children aged six to seven through ten to eleven are in this cognitive stage.
5. "Do you think the children you see on TV are a lot like you and your friends or are they kind of different?"

   "How about the fathers you see on TVF shows? Are the fathers on TV shows a lot like fathers in real life, or are they kind of different? What do you think?"
6. Greenberg and Reeves (1976), in their study of perceived realism of television, report that "perceptions of the reality of TV increase as specificity of content increases" (p.86), i.e., they report the more specific the topic asked about, the more likely children were to term it "real-to-life." As will be shown below, neither the responses of the total sample here nor those of our two age-grade sub-groups support their finding. (Note their use of "reality" as a synonym for "realism.") Perhaps where the method uses paper and pencil and closed-end questions, children more often agree that a topic is realistic in large part because the topic is explicit, clear. Given the specificity of the referent, children more often could think of some trait which to them was realistic.
7. The method of reporting used by Greenberg and Reeves (1976) unfortunately obscures both inter- and intra-individual variations. However, their data in Table 2 (p. 92) suggest that the children they tested showed the same inconsistency by topical area. The method of reporting most often is an "average" score on a set of some three to five items. See also Donimick and Greenberg (1970), Greenberg (1971), and McLeod, Atkin and Chaffee (1972).

   In the latter study the "average" response of nine- and ten-year-olds is "that they are uncertain jsut how real to life television is." Another possible interpretation is that most of these children said some aspects of television were realistic and some aspects were not. Reeves (1977) supports this last interpretation.
8. In regard to TVF characters, Greenberg and Reeves state, "The people, the actors, the heroines are very alive and realistic to the child viewer" (1976, p.94) and to them this is a source of considerable "concern." This generalization and the concern expressed both derive from unprobed closed-end questions. The quotations cited above suggest their concern is unfounded.
9. It is difficult to quantify this distinction; two coding schemes were tried but did not adequately differentiate between statements that were not near either extreme. By a rough, partly quantitative, partly qualitative gauge, no more than half the second-graders cited motives, consequences, interpersonal relations, or similarly socially meaningful replies.
10. See Hoffman's 1977 summary and critique of Zimmerman and Rosenthal's 1974 review of the literature on generalization and transfer to "novel and unfamiliar" settings.
11. Both behavior and perceived realism of television were measured by closed-end questions. All behavioral measures were reports by the child and some dealt with contingent behavior.

REFERENCES

Brown, R. Introduction. In R. Brown (Ed.), *Children & television*. Beverly Hills, Calif.: Sage, 1976.

Chandler, M.J. Social cognition. A selective review of current research. In W.F. Overton & J.M. Gallagher (Eds.), *Knowledge & development. Advances in research & theory. Vol. I.* New York: Plenum Pub., 1977.

Comstock, G.A. The impact of television on American institutions. *J. of Communication.* 1978, *28*, No. 2, 12-28.

Dominick, J.R. & Greenberg, B.S. Mass media functions among low income adolescents. In B.S. Greenberg & B. Dervin (Eds.), *Use of the mass media by the urban poor.* New York: Praeger, 1970.

Flavell, J.H. *Development psychology of Jean Piaget.* Princeton, N.J.: D. Van Nostrand, 1963.

Hartley, R.L. *The impact of viewing 'aggression'. Studies and problems of extrapolation.* New York: Columbia Broadcasting System, Office of Social Research, 1964.

Hawkins, R.P. The dimensional structure of children's perceptions of television reality. *Communications research.* 1977, *4*, No. 3, 299-321.

Hoffman, M.L. Identification and imitation in children. Unpublished paper, 1977.

Klapper, H.L. Did anyone do anything that would be wrong for you to do. Paper presented at the American Association for Public Opinion Research. Bolton's Landing, N.Y. May, 1969.

Klapper, H.L. Cognitive development in television perception. *J. of educational television.* 1976, *2*, No. 1, 109-112.

Lamal, P.A. Imitation learning of information-processing. *J. of experimental child psychology.* 1971, *12*, No. 2, 223-227.

Noble, G. *Children in front of the small screen.* Beverly Hills, Calif.: Sage, 1975.

Piaget, J. *The origin of intelligence in the child.* London: Routledge, 1953.

Ryan, K. Television as a moral educator. In R. Adler & D. Cater (Eds.), *Television as a cultural force.* New York: Praeger, 1976.

Wackman, D.B. & Wartella, E. A review of cognitive development theory & research & discussion of implications for research on children's responses to television advertising. Paper prepared for the Ford Foundation Seminar. Dec., 1973.

Wiese, M. & Cole, S. A study of children's attitudes & the influence of commercial films. *J. of psychology.* 1946, *21*, 51-71.

CHAPTER 4

Measuring Children's Response to Television Advertising

PAUL ZUCKERMAN
and LAWRENCE GIANINNO

PAUL ZUCKERMAN and
LAWRENCE GIANINNO

Measuring Children's Response to Television Advertising

ABSTRACT

This study was designed to determine whether the way questions are asked will change conclusions about how well children understand the differences between television programs and television commercials. Sixty-four children, ages 4, 7 and 10 years, were presented with a series of tasks which involved verbal or non-verbal responses. The children were required to: (a) name or recognize pictures of television program and commercial characters; (b) explain what commercials are; and (c), respond to various definitions of the term "commercial" by selecting appropriate character pictures. Performance on each of the measures improved with age. For each age group, children's non-verbal responses indicated that they had a better understanding of what commercials are than their verbal responses alone suggested. The disparity between verbal and non-verbal responses was most pronounced among the four-year-olds. The study suggested that conclusions would be more correct if researchers made greater use of non-verbal measures when assessing the impact of television on young children.

INTRODUCTION

Previous research has indicated that young children do not understand the purposes of television commercials and have a difficult time discriminating between television commercials and television entertainment programs (e.g., Blatt, Spencer, & Ward, 1972; Ward, Wackman, & Wartella, 1977). The possibility exists that this find-

ing is partly, perhaps largely, due to a research artifact. Specifically, it is possible that previous research, which has depended upon children's ability to articulate some relatively abstract concepts, has greatly underestimated children's understanding of television commercials and their ability to discriminate between commercials and programs.

The present study was designed to determine whether the way questions are asked will change conclusions about how well children understand the differences between television programs and television commercials. A large body of literature suggests that a young child's linguistic and cognitive abilities initially develop somewhat independently of one another (e.g., MacNamara, 1972; Nelson, 1973; Piaget, 1966; Vygotsky, 1962). During early childhood, children are often unable to express verbally what they know and understand. Furthermore, for the young child, the meaning of a word may change according to the context in which it is used. Hence, the child's use of a concept may be unstable and likely to vary from that of an older child's or an adult's use of that concept. It may therefore be misleading to rely solely on verbal measures to infer children's understanding of commercials.

In the current study, it was predicted that while children's understanding of commercials would improve with age, children at each age would better demonstrate their knowledge of what commercials are via non-verbal rather than verbal responses.

METHOD

Subjects

A total of 64 children, 20 four-, 24 seven-, and 20 ten-year-olds participated in the study. At each age half the children were boys and half were girls. The children were predominantly white and from a middle class suburban community. Each child was interviewed individually by one of four professional female interviewers.

Character Pictures

Stimulus materials were 5"x7" color photographs of animated characters who regularly appear on children's television. Characters were selected so as to meet the following criteria: (1) the characters should have either program or commercial affiliations, but not both; and, (2) the characters with commercial affiliation should

be associated with food or drinks. From the characters that met these specifications, 10 program and 10 commercial characters were randomly selected for the study.

Measures

There were four experimental tasks: In tasks 1 (Identification and Recognition) and 3 (Paired Comparisons) where materials were presented in a prescribed order four separate random orderings were used.

1. *Identification and Recognition:* The character pictures were arranged face-up on a table so that each picture could be seen. For character identification, the experimenter pointed to a picture and asked the child who it was. This procedure was repeated for all 20 pictures. Character recognition followed. The names of the characters not identified or identified incorrectly were read one-by-one to the child who was asked to point to the character named. A character was considered recognized if it was (a) identified or (b) pointed out.

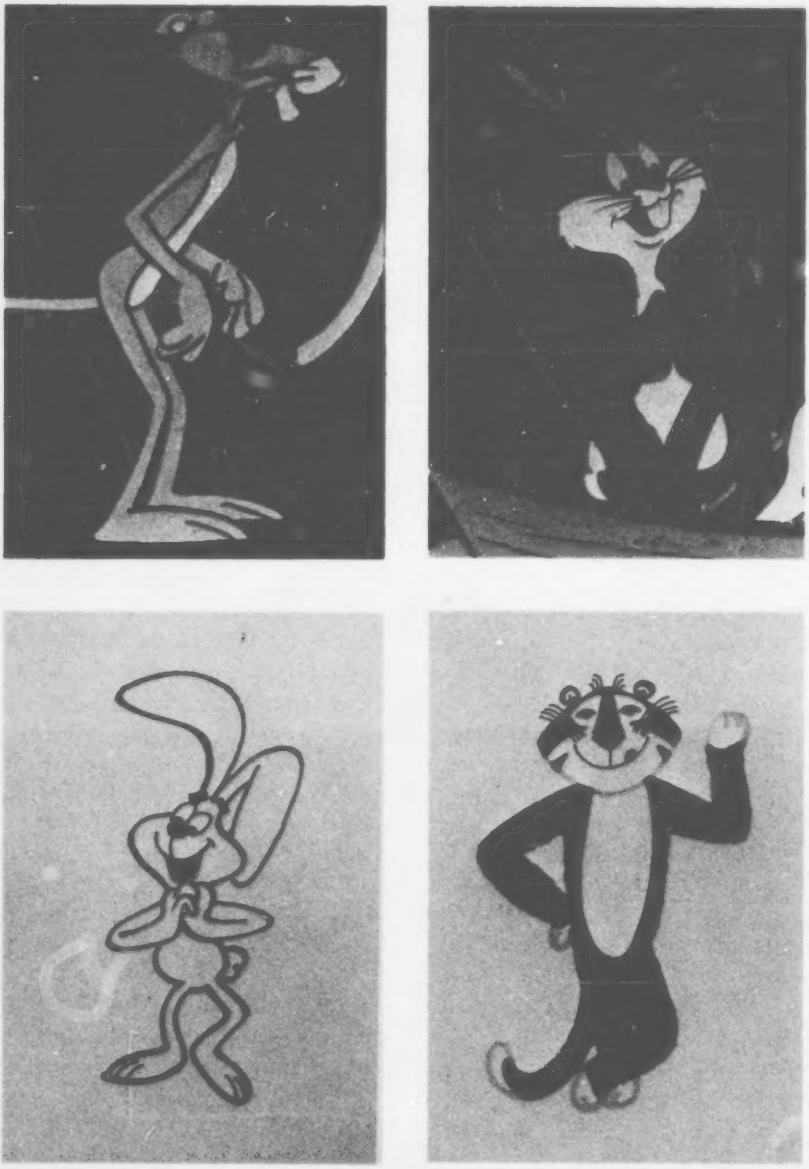
2. *Verbal Questioning:* The character pictures were removed from the table. Each child was then asked questions about commercials. The children were asked to explain what a commercial is, and to describe the difference between programs and commercials.

3. *Paired Comparisons:* Ten pairs, each consisting of one program and one commercial character, were randomly generated. The first pair was placed in front of the child. The experimenter asked the child to point to the character who is in a commercial. The child was then asked to point to the character who shows (*the product name*) on television. This procedure was repeated for all ten character pairs.

4. *Picture Sorting:* The 20 character pictures were shuffled and placed in front of the child. The experimenter first asked the child to pick out all the characters who show "food or drinks" on television and place them in a pile. When the child had finished selecting characters, the pictures were reshuffled and placed out again. The child was then asked to pick out the characters who "try to make you want to buy something."

Procedure

Testing was conducted in four small rooms containing a table and 2 chairs. All 20 character pictures were on the table when the child entered the room. An experimenter greeted each child upon arrival to the test site and brought the child to the test room.



Above are a few of the 20 pictures used in the sorting test. The top row ("Pink Panther" and "Bugs Bunny") appear in cartoon shows. In the lower row are cartoon spokesmen for popular cereals ("Trix" rabbit and "Frosted Flakes" Tony the Tiger). Children were asked to identify which characters "try to make you want to buy something."

In a 2-3 minute warm-up period, the experimenter talked to the child about television (e.g., Do you like TV? What do you watch?). The warm-up ended with the experimenter asking the child if he or she knew any of the characters on the table.

The four experimental tasks, Identification and Recognition, Verbal Questioning, Paired Comparisons, and Picture Sorting were then administered. Testing lasted 10-15 minutes and appeared to be an enjoyable experience for the children.

RESULTS

As in previous studies addressing children's perceptions and understanding of commercials, age differences emerged from the data. In each of the four measures, children's ability to demonstrate or articulate their understanding of the concept of a commercial improved with age.

Unlike earlier studies, this study assessed children's non-verbal as well as verbal responses concerning their perception and understanding of commercials. In general, the data indicated that while many children could not articulate their understanding of what a commercial is, they were able to use the term "commercial" to respond to each of the various tasks; i.e., children's non-verbal responses indicated they had a better understanding of what commercials are than their verbal responses suggested.

Character Identification and Recognition. Children's familiarity with the test characters improved with age. Of the 20 stimulus characters, the mean number correctly identified (named) for four-, seven- and ten-year-olds was 7.90, 14.54 and 17.50 respectively, $F\ (2,58) = 26.96$, $p < .001$. Boys were better able to identify characters than girls, $F\ (1.58) = 5.02$, $p < .05$; there was no sex by age interaction, $F\ (2,58) = 1.45$.

A similar pattern emerged for character recognition (characters correctly named plus those pointed out when a name was provided for the child). However, recognition of characters was far superior to identification, $F\ (1,61) = 225.50$, $p < .001$. The mean number of characters recognized by four-, seven- and ten-year-olds was 17.45, 19.25 and 19.90, $F\ (2,58) = 8.45$, $p < .001$. Boys performed better than girls, $F\ (1,58) = 5.00$, $p < .05$. Again, there was no sex by age interaction, $F\ (2,58) = 1.18$.

Verbal Questioning. Children's verbal responses to questions about commercials paralleled previously reported findings (Blatt, Spencer and Ward, 1972). With increasing age, children demonstrated better ability to articulate what commercials are and why they are on television.

In response to the question, "What is a commercial?," the four-year-olds had almost nothing to say. All but one child said they did not know the answer to the question or provided vague responses (e.g., "It's on television"). The seven- and ten-year-olds most often said that comercials show or describe something, such as a specific product. Mention of the selling aspect of commercials was infrequent; even among ten-year-olds only 15 percent (3 children) spontaneously talked about the sales aspect of commercials (see Table 1).

The children who answered "Yes" to the question, "Do you know what is the difference between a commercial and program?" were then asked to describe what the difference is. Their responses, summarized in Table 2, revealed four types of explanations which had to do with: function (indicating what a commercial or program does, e.g. "A commercial shows you cereal," "A program is just for

TABLE 1
FREQUENCY OF CHILDREN'S RESPONSES TO THE QUESTION: WHAT IS A COMMERCIAL?

	Age in Years		
Response Category	4 (N = 20)	7 (N = 24)	10 (N = 20)
Don't know/No answer	12(60%)	5(21%)	—
Unclear response (e.g., "It's on television"; naming of a specific character)	7(35)	7(29)	5(25%)
Show or describe something (e.g., "An advertisement," with no further clarification. "Like when they show you a toy or something")	—	11(46)	12(60)
Intent to sell (e.g., "They show you things you can buy")	1(5)	1(4)	3(15)

fun"); length (indicating relative time difference between programs and commercials, e.g., "Commercials are shorter"); execution (talking about specific execution differences such as the number of characters and their behavior in a program or commercial, e.g., "Sometimes they sing in a commercial. They don't do that much in programs "); and economics (suggesting or expressing the selling aspect differentiating programs and commercials, e.g., "Commercials try to get you to buy something").

TABLE 2
FREQUENCY* OF CHILDREN'S RESPONSES TO THE QUESTION: WHAT IS THE DIFFERENCE BETWEEN PROGRAMS AND COMMERCIALS?

	Age in Years		
Response Category	4 (N = 20)	7 (N = 24)	10 (N = 20)
Don't know / No answer	15(75%)	9(38%)	4(20%)
Length—time differences (e.g., "Commercials are shorter")	2(10)	10(42)	10(50)
Function—what each does (e.g., "In a commercial they show you something")	1 (5)	6(25)	15(75)
Execution—specific content elements (e.g., mention of a specific slogan or character)	2(10)	4(17)	5(25)
Economics—sales aspect of commercials (e.g., "Commercials try to get you to buy something")	—	3(13)	4(20)

*Multiple responses are possible.

Three-quarters of the four-year-olds were unable to specify a difference between programs and commercials. Similar responses occurred for 38% of the seven- and 20% of the ten-year-olds. Children who did respond most often mentioned time or function distinctions between programs and commercials, i.e., they spoke of time differences and / or the showing or explanation of a product as the basic difference between commercials and programs. The selling aspect of commercials was mentioned with relatively low frequency.

Paired Comparisons. In the paired comparisons test, children were first asked to select which of two characters placed before them was in a commercial. This task was repeated for 10 different picture pairs. Performance on this task is summarized in Table 3. Correct identification of commercial characters was near-perfect and perfect among seven- and ten-year-olds, respectively. Responses of the four-year-olds varied; 55% correctly selected the commercial characters. An additional 25% reversed the dimension, i.e., they consistently selected the program character. Apparently, these children differentially perceived commercial and program characters but failed to apply the proper label to the characters.

TABLE 3
NUMBER OF CHILDREN CORRECTLY RESPONDING TO THE DIRECTION: POINT TO THE CHARACTER WHO IS IN A COMMERCIAL

	Age in Years		
Number of Correct Choices	4 (N = 20)	7 (N = 24)	10 (N = 20)
8-10*	11(55%)	22(92%)	20(100%)
3-7	4(20)	2 (8)	—
0-2*	5(25)	—	—

*Performance was beyond chance level for 10 trials, $p < .05$.

When asked to point to the character in each pair who "shows you (product name) on television," all age groups performed at near perfect levels.

Neither seven- nor ten-year-olds showed differences in performance between (a) selecting a commercial character, and (b) selecting a character who shows a specific product on television; however, there was a significant difference in performance of four-year-olds on these two tasks, Tukey's HSD 8.4 = $p < .01$, df = 61. These youngest children were less likely to respond to the word "commercial" than they were to a specific product and the character with which they associated the product. Comparing the verbal responses of the children with their non-verbal pair responses as shown in Figure 1, it is evident that children used the commercial dimension to follow directions better than they could describe what the commercial dimension is or involves. While the performance of

all children in this study can be characterized in this manner, the point was most dramatically made by the four-year-olds.

Picture Sorting. Results for each picture sorting task were computed by subtracting the number of false positives (program characters) from the number of commercial characters selected. Therefore, the maximum number of characters a child could select was 10. Children's performance on both tasks improved with age; there were no sex differences.

Four-, seven- and ten-year-olds chose an average of 7.34, 9.55 and 9.90 characters "who show you food or drinks on television," $F(2,58) = 9.05$, $p < .001$. When asked to select characters who "try to make you want to buy something," mean character selection for these age groups was 3.00, 5.17 and 8.89, respectively, $F(2,58) = 8.60$, $p < .001$.

Ten-year-olds performed equally well on both tasks. However, the four- and seven-year-olds were better able to respond to the "food or drinks" direction, Tukey's HSD = 5.63, $p < .01$, df = 61, for four-year-olds; and 6.25, $p < .01$, df = 61 for seven-year-olds.

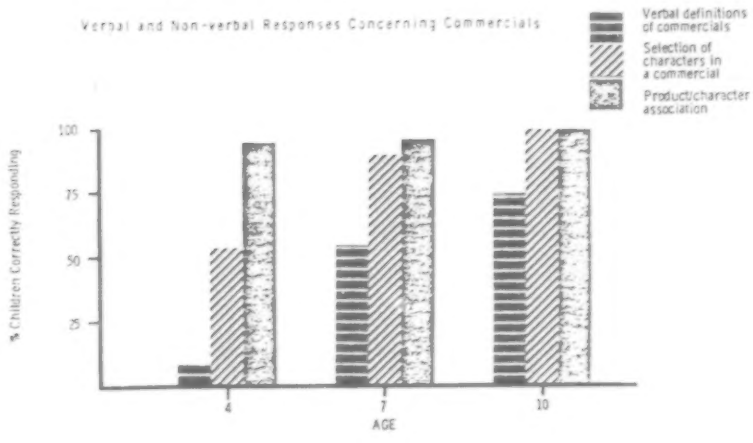


Figure 1. Percentage of children providing correct verbal and non-verbal responses concerning commercials.

DISCUSSION

Children's performance on several of the experimental tasks indicated that they knew more about television than their verbal responses alone suggested. For instance, in the character identification and recognition task, children were better able to point out characters when names were provided than to produce the character names themselves. Furthermore, when asked to point to the characters who showed specific products on television, even the four-year-olds responded at near perfect levels.

Finally, the disparity between children's verbal explanations of what commercials are and their ability to select characters on the basis of various definitions of the term "commercial" illustrated that the children's understanding of commercials was better than their verbal responses alone would allow us to infer. This disparity between verbal and non-verbal responses was particularly strong for the four-year-olds.

The findings of the present study were consistent with the cognitive development literature which suggests that young children are often unable to express what they know; their powers of comprehension characteristically outpace their skills of expressing what they understand (e.g., MacNamara, 1972; Nelson, 1973; Piaget, 1966; Vygotsky, 1962). Consequently, it is potentially misleading for researchers to infer from verbal responses alone what children do or do not perceive and understand about television programs and commercials.

REFERENCES

Blatt, J., Spencer, L., & Ward, S. A Cognitive Developmental Study of Children's Reactions to Television Advertising. In Rubinstein, E.A., Comstock, G., & Murray, J. (Eds.) *Television and Social Behavior*, Vol. 4. Washington, D.C.: U.S. Government Printing Office, 1972.

MacNamara, J. Cognitive basis of language learning in infants. *Psychological Review*, 1972, 79(1), 1-13.

Nelson, K. Some evidence for the cognitive primacy of categorization and its functional basis. *Merrill-Palmer Quarterly*, 1974, 81, 267-85.

Piaget, L. *Psychology of Intelligence*. Totowa, New Jersey: Littlefield, Adams & Co., 1966.

Vygotsky, L.S. *Thought and Language*. Cambridge: The M.I.T. Press, 1962.

Ward, S., Wackman, D.B., & Wartella, E. *How Children Learn to Buy*. Beverly Hills: Sage, 1977.

CHAPTER 5

A Quantitative Study of Young Children's Comprehension of Television Programs and Commercials

LESLIE GAINES
and JUNE ESSERMAN

LESLIE GAINES and
JUNE ESSERMAN

A Quantitative Study of Young Children's Comprehension of Television Programs and Commercials

ABSTRACT

This research was undertaken to determine a) the extent to which young children can distinguish between television programs and commercials and, b) the extent to which young children can recognize the selling intent of commercials vs. the non-selling intent of television programs. Interviews were conducted with 104 youngsters aged 4 to 8 years old using a technique called "signal stopping." This procedure entails stopping the video taped presentation of a children's program embedded with a children's cereal commercial at critical points and asking children specific questions. The findings of this study indicate that children as young as 4 years old can easily distinguish between television programs and commercials, can recognize the selling intent of commercials and are even skeptical about commercials. Overall, older aged children performed better than youger aged children. Results indicate that television advertising directed at children may not be as deceptive and unfair as previously believed.

BACKGROUND

In the spring of 1979, the presiding officer in the U.S. Federal Trade Commission's (FTC) hearings focused in on several key issues after hearing testimony for months from all kinds of experts, psychologists, authorities in child development, and advocates for and against children's television advertising (1). The research

reported herein was undertaken in response to that first policy issue delineated by Judge Needelman as still being open to debate:

> To what extent can children between the ages of 2 and 11 distinguish between children's commercials and children's programs to the point that they comprehend the selling purpose of television advertising aimed at children?

The above stated policy issue identified two research questions for further exploration, the first issue was the extent to which young children can perceive commercials as distinct and separate from adjacent programs and second, the ability of young children to perceive the selling intent of commercials vs. the non-selling intent of programs.

Child Research Service, Inc. (C.R.S.) has had extensive experience interviewing children of all ages in response to television advertising. After considerable research, C.R.S. sought a different method to test children's understanding of television programs vs. commercials. Up to now, the majority of data on children's abilities to make distinctions between the two television formats have been dependent upon children's answers to questions *after* viewing has taken place. Such methods rely too heavily on children's recall capabilities and recognition memories, both of which are fairly limited at such young ages (2). Instead, research with young children under the age of 8 needs to take into account children's perceptions of commercials and programs *during* the process of viewing.

A technique called "signal stopping" is designed specifically to assess perception during viewing. This procedure was adapted from some research conducted on program/commercial separators by Palmer and McDowell (3). Signal stopping is simply a method of stopping television programs and commercials at specific points while the subject is viewing. During these interruptions, respondents are asked to describe what they perceive as happening on the screen, thus providing immediate feedback rather than delayed feedback.

RESEARCH QUESTIONS

The primary purpose of this research was to determine the extent to which young children could recognize the distinctions between commercials vs. programs and between selling intent vs. non-

selling intent. In addition, this research aimed to refine the "signal stopping" procedure for subsequent research endeavors in this area.

METHOD

the fall of 1979, developmental research was initiated to develop the interviewing instrument and to determine the signal stopping points.

A videotaped presentation was prepared by experts which contained a six minute cartoon program embedded with a 30-second animated commercial aimed at children. Both the cartoon and the commercial appeared in full color. The cartoon itself was titled "The Mouse of Tomorrow" and featured Mighty Mouse's heroic efforts to save a town inhabited by mice from an attack by cats. The children's commercial for a breakfast cereal featured a likeable bear who saves two youngsters from a collapsing bridge by means of his snowplow. One of the criterions of this study was that the video presentation include both an animated children's program and an animated commercial. This was deliberately built into the design in order to address the current fantasy-reality debate. Some critics (4,5) argue that animated commercials are more deceptive and confusing to children and further inhibit their abilities to determine when programs end and commercials begin. C.R.S. believed that the selection of a program and a commercial using identical production formats would be examining children's abilities to distinguish between the two formats under the most stringent conditions.

In addition, another criterion was that the children's commercial be repeated twice within the program. Two viewings of a commercial is typical advertising practice during children's television programming (6). Children first saw the commercial within the program in its entirety without interruption. It was during the second viewing of the commercial that children were asked about what they were seeing.

Interviewing took place at the Center For Family Research in Rutherford, New Jersey and were recruited from nearby towns representing a variety of socioeconomic and ethnic backgrounds. (U.S. Census housing costs indicate that communities from where children were recruited were predominantly middle to lower class

communities.) Besides quota requirements of age and sex, children were only eligible if they were allowed to watch television at least twice a week. Table 1 presents the sample composition:

TABLE 1
AGE AND SEX PROFILE OF SAMPLE

AGE	Total (104)	SEX Boys (52)	Girls (52)
4 years old	18	9	9
5 years old	22	11	11
6 years old	24	12	12
7 years old	20	10	10
8 years old	20	10	10

Children were interviewed on an individual basis by two trained and experienced interviewers. The room in which the children watched the videotaped presentation and responded to questions is designed specifically for children and reflects a cheerful, comfortable, and home-like atmosphere. Before interviewing began, children were given time to relax and become comfortable. Children were told that there are no right or wrong answers to the questions being asked. On those few occasions when children were wary of being alone, the parent or a sibling was allowed in the private viewing room with the child to provide assurance. The accompanying family member was given strict instructions to remain silent during the interview.

At critical points in both the commercial and program, the videotape was stopped and the frame was frozen on the screen. At such times, children were asked the appropriate questions and all answers were taken down verbatim.

Each interview was recorded on magnetic sound tape and took approximately 20 minutes.

RESULTS

Children were asked a series of questions about what was happening in the program segment and in the commercial segment.

When the videotape was stopped during the commercial, children were asked whether it was part of the show about the mouse.

If children reported that the part they were viewing was a commercial, was for the purposes of selling a cereal, was not part of the story about the mouse, or was a different show, they were reported as correctly identifying the commercial as separate from the program. As seen in Table 2, nine out of ten children aged 4 to 8 years old were able to recognize that the commercial segment was not a part of the program. All older aged children, 6 to 8 year olds, were clearly able to differentiate between the commercial and the program. A slightly lesser percentage (90%) of younger aged children, 4 to 5 year olds, were able to make this distinction. No differences were evident by sex.

TABLE 2
NUMBER OF CORRECT IDENTIFICATIONS OF COMMERCIAL

		AGE		SEX	
	Total	4-5 years	6-8 years	Boys	Girls
Commercial Segment	(104)	(40)	(64)	(52)	(52)
Correctly identified commercial as separate from program	96%	90%	100%	94%	98%
No indication of recognition of commercial as separate from show	4	10	—	6	2

When children were asked specifically what a commercial was for and why it was on television, three quarters (76%) of the sample evidenced understanding of the purpose of commercials. Close to 1 out of 4 children understood that commercials were on television to sell or advertise merchandise, to persuade viewers to buy products, or to show products available at the stores. Older aged children were more likely than younger aged children to understand the selling intent of commercials although the majority of younger aged children were able to do so. Sex differences on this question were not apparent.

At the end of the commercial, the videotape was stopped and children were asked about how they felt about the cereal they had just seen on television. The results to this question are shown in Table 4. The majority of children were skeptical about what they had seen on the commercial and had reservations about the cereal.

This was clearly more evident among the 6-8 year olds (95%) than among the 4-6 year olds (57%).

Close to one-third of the 4 to 6 year olds gave ambiguous answers which could not be categorized or were unsure of how they felt. Younger aged children were also somewhat more inclined to say that they would go to buy the cereal or get their mothers to purchase it than older aged children. However, among all aged children interviewed, responses indicating that they would try to get the cereal were the least often mentioned. Again, sex differences did not occur.

TABLE 3
UNDERSTANDING THE PURPOSE OF COMMERCIALS

		Age		Sex	
Purpose child attributed to commercial segment:	Total (104)	4-5 years (40)	6-8 years (64)	Boys (52)	Girls (52)
Evidenced understanding of purpose of commercial	76%	63%	85%	74%	80%
- to sell, to advertise things	29	20	38	22	30
- to try to make you buy things	22	10	28	22	25
- to show things you can buy	25	33	19	30	25
No evidence shown of understanding the purpose of commercial:	24	37	15	26	20
- reasons not related to any selling purpose	9	15	6	7	11
- don't know/no answer	15	22	9	19	9

DISCUSSION

There are three major implications resulting from the findings of this study:

1. Children between the ages of 4 and 8 can distinguish between television programs and commercials.

2. Children between the ages of 4 and 8 can recognize the selling intent of commercials.
3. "Signal Stopping" proved to be an effective research tool which allowed children to operate at their best and offered evidence supporting the above two findings.

TABLE 4
CHILDREN'S VIEWS ABOUT THEIR LIKELY RESPONSE TO VIEWING THE COMMERCIAL SHOWN

		Age		Sex	
	Total	4-5 years	6-8 years	Boys	Girls
RESPONSES	(104)	(40)	(64)	(52)	(52)
Discriminating, or skeptical responses (e.g., Would look at price first; Might not be good for me; Might prefer another brand; Mother might disapprove; Might not be as good as they say; Don't like the kind they showed; Maybe if rest of family likes it; Can't believe what they say because they want your money; Might not need it, etc. . . .)	81%	57%	95%	79%	83%
Don't know or ambiguous responses (e.g., It's for breakfast; Some people might buy it; Can't say; No response to question, etc. . . .	13	30	3	15	11
Inclined to get the product (e.g., Looks good; I'd go to the store Ask mother to buy it, etc. . . .)	6	13	2	6	6

The findings of this study are valuable for several reasons. Wartella and associates (7) have suggested that research being done today on children's television advertising should focus more on means to facilitate children's performance than on children's deficits. In other words, when conditions are right, children may be better able to perform to the best of their cognitive abilities. Signal stopping apparently facilitated children to perform optimally due to its minimal dependence on what children have stored in their memories and their abilities to retrieve that information. Recall has been stated to be one of the more difficult processes for children because "it demands regeneration in the absence of the stimulus." (8). Asking children questions about commercials *after* they have been viewed depends too heavily on recall memory. Signal stopping, on the other hand, allowed children to report their impressions and understandings as they experienced and witnessed them instantaneously. This procedure undoubtedly captured children at the moment they were best able to communicate their understanding regarding the differences between programs and commercials as well as what commercials intend to do.

Moreover, although the findings of this study confirm previous findings that older aged children are wary and discriminating about television commercials (10, 11), this study indicates that a good percentage of younger aged children (4 to 5 year olds) are equally skeptical. Children under the age of 8 do not necessarily take everything they hear or see on television as the gospel truth. Instead, they apply their cognitive resources to each experience and make decisions based upon fairly mature capabilities.

Additionally, the findings from this study confirm more recent evidence about young children's abilities to make distinctions between television programs and commercials, and to understand the selling intent of commercials (3, 9). Donahue, Henke, and Donahue (9) recently found that 3 to 6 year old children clearly understood that commercials wanted people to purchase products. Their study relied on nonverbal assessments which also adds support to Wartella's claim that perhaps previous research was testing children under conditions which were nonadvantageous to children's performances.

Although the sample size of children studied here was limited, the findings reported herein indicate that children are cognizant of distinctions between commercials and programs and perhaps this

distinction is best fostered by their understanding of commercials' selling intent vis-à-vis programs' non-selling intent. Overall, results show that television advertising aimed at children is not misleading and unfair because young children are able to make judgments about what they see on television.

REFERENCES

Presiding officer's order No. 78: Certification to the Commission of Recommended Disputed Issues of Fact. In the Matter of Children's Advertising, 43 Fed. Reg. 17967, 1978.

Mussen, P.H., Conger, J.J., Kagan, J. *Child Development and Personality*. New York: Harper & Row Publishers, 1969.

Palmer, E.L. and McDowill, C.N. Program/Commercial Separators in Children's Television Programming. *Journal of Communications*, 29 (3), 1979, pp. 197-201.

Quarforth, J.M. Children's Understanding of the Nature of Television Characters. *Journal of Communications*, 29 (3), 1979, pp. 210-218.

Atkin, C.K., Hocking, J., Gantz, W. *How Young Children Perceive Television Commercials*. Paper presented at the 70th annual Convention of the Eastern Communication Association, Philadelphia, May, 1979.

Laurie, Liz. Children And Television Advertising. *Journal of Advertising*, 1976.

Wartella, E., Wackman, D.B., Ward, S., Shamir, J. and alexander, A. The Young Child As Consumer. In Wartella, E. (ED.). *Children Communicating: Media and Development of Thought, Speech, Understanding*. Vol. 7, Beverly Hills, Sage Publications, 1979, pp. 252-282.

Brown, A.L. "The development of memory." In H.W. Reese (ED.), *Advances In Child Development and Behavior*, 10. New York: Academic Press, p. 111.

Donohue, T.R., Henke, L.L., Donhue, W.A. Do Kids Know What TV Commercials Intend? *Journal of Advertising Research*, 20 (5), 1980, pp. 51-57.

Ward, S., Wackman, D., Wartella, E. *How Children Learn To Buy*. Beverly Hills, Sage, 1977.

Bever, T.G., Smith, M.L., Benger, B., Johnson, J.G. Young Viewer's Troubling Response to TV Ads. *Howard Business Review*, vol. 53, no. 6., 1975, pp. 119-121.

CHAPTER 6

Children and Television Advertising: Policy Issues, Perspectives, and the Status of Research

JOHN ROSSITER

Reprinted from *CHILDREN AND THE FACES OF TELEVISION: Teaching, Violence, Selling.* Copyright © 1981 by Academic Press, Inc.

JOHN ROSSITER

Children and Television Advertising: Policy Issues, Perspectives, and the Status of Research

This chapter delineates and critically examines policy issues in the controversial area of television advertising directed to children. The chapter has four sections. The first section presents a unique endeavor to define the concept of a policy issue and then provides an analytical framework for classifying policy issues in children's television advertising. The second section utilizes the definition and analytical framework to evaluate major statements about children's television advertising policy that have appeared to date. The third section focuses on the contributions and the limitations of children's television advertising research as an input to policy decisions and describes the likely role of research in the ultimate determination of policy. The fourth section presents a summary and brief outlook on the "selling face" of children's television and the future direction of policy in this area.

THE NATURE OF POLICY ISSUES

Everyone seems to have an implicit understanding of what a policy issue is. Yet the concept has nowhere, to my knowledge, been explicitly defined. Here I will first offer an operational definition applicable to policy issues in children's television advertising. I will then expand on this definition to provide an analytical framework which will serve as a basis for policy issue evaluation in the remainder of the chapter.

Policy Issues: A Definition

Policy issues in children's television advertising arise when (*a*) a specific advertising practice; or (*b*) an entire category of advertising

is perceived; as (*c*) utilizing means; or (*d*) resulting in ends; which are (*e*) contrary to the ethical values; (*f*) held by some publicly significant party. Although the concept of a policy issue is defined here in the context of children's television advertising, it may be noted that a policy issue in *general* arises when some action is perceived by some publicly significant party as utilizing means or resulting in ends which are contrary to the ethical values held by that party. The term *ethical values* here refers to beliefs that given modes of conduct are right versus wrong or good versus bad.

The utility of this six-component definition of policy issues in children's television advertising will, I hope, become evident as the chapter proceeds. We will see, for example, that some publicly significant parties [component (*f*) in the definition], notably industry groups who have assumed self-regulatory responsibility, focus mainly on specific advertising practices (*a*); whereas others, notably consumer advocacy groups and federal regulatory agencies, tend to focus on entire categories of advertising (*b*). Similarly, some statements of policy identify only the means underlying certain practices or categories of advertising (*c*); others identify only ends (*d*); and still others, though infrequently, identify both the means and the ends. Inextricably woven through every policy issue in children's television advertising are the ethical values (*e*) and consequent value judgments of the publicly significant parties with whom the issues originate.

An Analytical Framework

The preceding definition can be expanded to provide an analytical framework for classifying policy issues in children's television advertising (see Rossiter, 1977, for an earlier version). The analytical framework postulates that policy issues can be regarded as propositions or statements, the subjects of which are either particular advertising practices or else entire categories of advertising, and the predicates of which (*a*) are either empirically verifiable (facts) or not empirically verifiable (values); and (*b*) refer to either alleged causes (means) or to alleged effects (ends). The framework is shown schematically in Table 1. As can be seen from the table, the two dimensions lead to a fourfold typology of policy issues. Why are these two dimensions important?

The first dimension, that of empirical verifiability, bears critically on the potential contribution of research as an input to policy. The notion of empirical verifiability derives most directly from the

TABLE 1
AN ANALYTICAL FRAMEWORK FOR CLASSIFYING POLICY ISSUES IN CHILDREN'S TELEVISION ADVERTISING

	Proposition refers to		
	Means	Ends	FTC Act Concepts
Facts (empirically verifiable proposition)	False advertising	Misleading advertising	Deception
Values (nonverifiable proposition)	Unfair means	Unfair ends	Unfairness

philosophical arguments of A. J. Ayer (1936; 1960). Some propositions express matters of fact; that is, they can, at least in principle, be proven true or false. For example, the proposition "television advertising leads to parent-child conflict" can be subjected to empirical investigation and the extent of its truth or falsehood established to some criterion of certainty. Other propositions, in contrast, express matters of value; that is, they cannot be proven true or false but only agreed with or disagreed with in an attitudinal or emotional sense. For example, the proposition "parent—child conflict is bad" expresses a value, an ethical judgment of rightness or wrongness, not something that is capable of empirical proof through research. Sometimes, policy issues are stated in a more complex form which includes a factual and a value proposition, but we shall see that such complex statements are reducible to simpler, unitary propositions.

The principle of ethics which applies universally in children's television advertising policy is Durkheim's (1915) "social approbative theory" which holds that "*X* is good or right" = "society approves of *X*." More precisely, according to the earlier definition of policy issues, the ethical principle in children's television advertising policy might be called "party approbative theory" in that some publicly significant party, such as the Federal Trade Commission (FTC), consumer advocacy groups, the general public, or industry representatives, is doing the approving. Empirical research obviously has no role in value propositions incorporated in policy issues, except in the minor sense that research methodology may be used to poll the value judgments of relevant parties.

The second dimension, that of whether the proposition entailed in the policy issue refers to the means involved in or to the ends resulting from an advertising practice or category of advertising, is equally important. The importance of the means-ends distinction is dramatically illustrated in the current policy controversy (discussed more extensively later in this chapter). Consumer advocacy groups and the FTC have alleged that it is "inherently deceptive and unfair" to advertise to children who cannot understand the selling purpose of advertising. This is a *means* proposition—no effects or ends are specified. Industry representatives have demanded to know what (harmful) effects have resulted from advertising to such children. That is, they are calling for an *ends* proposition. The FTC has recently responded to this demand in a very interesting way, as we shall see in the next section of the chapter.

Together, the two dimensions produce four categories of policy issues as shown in Table 1. These categories refer to specific advertising practices or to entire categories of advertising that are false, misleading, employ unfair means, or result in unfair ends. These categories are illustrated briefly below and then are used in the policy analyses that follow.

False advertising is represented by propositions that are empirically verifiable (factual) but that focus only on advertising inputs (means) and not on advertising effects. It is a commonly held ethical value that the advertiser should not lie, deliberately or inadvertently, even if the falsehood has no effect on the consumer. For example, advertisements promoting mystical or occult services are prohibited on television because such services are regarded as being empirically false, regardless of whether consumers personally believe in the truth or falsehood of these phenomena. Interestingly, the FTC occasionally makes exception to this principle and allows "white lies." A classic case is the legally permissible substitution of shaving cream for real cream or ice cream in food advertising, where the lighting may melt the real product during filming. Generally, however, both self-regulatory and federal regulatory policies prohibit the use of objectively false claims or techniques regardless of any associated consequences or ends that might result.

Misleading advertising is represented by propositions that are empirically verifiable (factual) but that focus only on the effects of advertising (ends). The distinction between this and false advertis-

ing—both of which come under the FTC Act's concept of "deception"—is evident when one realizes that an advertising practice or category of advertising may be factually true yet result in consumer beliefs that are factually false (see Gardner, 1975; Jacoby & Small, 1975). For example, an orange juice beverage advertised to children might claim to be the "best there is." This claim might be objectively true, with the product consisting of the highest percentage and the highest quality orange juice on the market. However, it may mislead children to believe that the product is uniquely superior to other orange juice beverages, which may not be a factually true belief (other orange juice beverages could have equally good ingredients and also be the "best there is"). Of course, advertising can also be false *and* misleading, but note that policy issues regard either case as sufficient to prohibit the offending practice or category.

Unfair means represent propositions that are not empirically verifiable (values) and that focus only on advertising inputs (means) without regard to effects. For example, the policy statements of both the self-regulatory codes and the FTC regard it as unfair to allow children's program characters to serve as product presenters in advertising within or adjacent to the character's own program. No evidence has ever been submitted showing that this "host selling" practice results in any particular consequences for children (Adler, Lesser, Meringoff, Robertson, Rossiter, Ward, 1980). The practice is simply regarded as per se unfair; that is, it is regarded as contrary to the ethical values of both the self-regulatory parties and the FTC.

Unfair ends represent propositions that are not empirically verifiable (values) and that focus only on the effects (ends) of a given advertising practice or category of advertising. An excellent example is provided by the category of proprietary or over-the-counter drug advertising, which is prevented by self-regulatory codes from being directed to children or aired during children's programs. It is not that this advertising is false or misleading nor that it involves unfair means in its presentation. It is that one of the alleged effects of such advertising would be that children developed "excessive" beliefs in the efficacy of these products and were "overly predisposed" toward requesting them or, when older, taking them when illness symptoms occurred (Robertson, Rossiter, & Gleason, 1979). It is the "excessive" and "overly predisposed"

which are judged the unfair ends. In such policy issues it is the end results of the advertising that are considered to be unfair. One cannot prove fairness empirically; one simply agrees or disagrees depending on one's ethical values.

AN ANALYSIS OF POLICY ISSUES TO DATE

There have been five major statements of policy issues in children's television advertising to date: those of the self-regulatory codes, the Federal Communications Commission (FCC) in 1974, the National Science Foundation-sponsored review in 1977, the FTC Advisory Staff proposal in 1978, and the FTC Presiding Officer's recommendations of July, 1979. These statements can be readily classified into the four categories of false advertising, misleading advertising, unfair means, or unfair ends that I have just described, and they will be reviewed here in terms of this analytical framework.

Self-Regulatory Codes

Television advertising directed to children or aired during children's programs (i.e., children's television advertising as I have used the term here) has been and is at present governed directly by the self-regulatory codes of the National Association of Broadcasters (1975; periodically issued) and the National Advertising Division of the Council of Better Business Bureaus (1977). The two codes are quite similar in their identification of policy issues and share two characteristics which are crucial to the present analysis:

1. The codes identify as policy issues only *specific advertising practices and certain subcategories* of advertising. They do not question the general legitimacy of television advertising directed to children.
2. The codes focus primarily on *means* issues, that is, deceptive means (false advertising) and unfair means. They usually do not specify effects or end results that may be deceptive or unfair.

The first characteristic reflects the broad value judgment of those who prepared the codes (manufacturers, advertisers, and academic advisers) that, in general, advertising directed to children is a legitimate personal, social, and economic activity. Other publicly signif-

icant parties, notably Action for Children's Television (ACT), the Council on Children, Media and Merchandising (CCMM), and also the FTC, do not share the value judgment that television advertising directed to children is a legitimate activity. A major source of policy dispute, therefore, is whether only specific advertising practices should be regulated, whether advertising for certain products should be regulated, or whether children's television advertising in general should be regulated. As the FTC has recently brought this dispute more clearly into focus, I will consider the grounds for it in the sections dealing with the FTC's policy position.

The second characteristic, the codes' focus on means issues rather than effects or ends issues, is a subtle one. It is true that the self-regulatory codes identify various effects which children's television advertising should either avoid, since they are negatively valued, or aim for, since they are positively valued. The National Advertising Division (NAD) code is the more explicit in this respect, referring to such negative effects as unreasonable expectations of product quality and behaviors that can affect the child's health and well-being and to such positive effects as friendship, kindness, and constructive parent-child relationships. The subtlety, however, is that many of the prohibited practices specified in the codes *are not tied to these effects.*

Basically, the prohibitions, like that on advertising medications to children, reflect a value judgment about the types of products and the types of advertising practices that are "appropriate" for child audiences. They are not based on demonstrated negative effects from such advertising. Thus, manufacturer and advertiser acceptance of these "no effects specified" prohibitions is paradoxical in the context of their strong criticism of proposed FTC rules that do not identify effects. Proponents of self-regulatory codes, which themselves rely primarily on a means definition of policy issues, are demanding that the FTC adopt not a means definition but a means-and-ends definition of policy issues. Paradox aside, the important point here is that both these major parties to the controversy have primarily adopted a means approach to policy issues, with no clear effects specified.

Although the self-regulatory codes' policy statements themselves rarely specify effects, it is noteworthy that the NAD's executive decisions based on its code do, in fact, rely quite heavily on allega-

tions of an effect—misleading advertising. Most of the cases heard by the Children's Advertising Review Unit of NAD have involved advertisements that are alleged to result in beliefs about the product that are untrue (National Advertising Division, 1979). Rarely have the advertisements themselves been false. Most notably, the NAD rulings have avoided the other two categories of policy issues—unfair means and unfair ends. It is in these categories of value judgments rather than empirical verifiability that the self-regulatory codes are meeting their greatest challenge from consumer advocacy groups and from the FTC.

The 1974 Federal Communications Commission Policy Statement

The FCC's role in formulating children's television advertising policy has been a relatively minor one. Its 1974 report and policy statement (Federal Communications Commission, 1974) contained just two relevant points: (*a*) that the amount of advertising allowable during children's programs should be reduced; and (*b*) that commercials during children's programs should be more clearly separated from programs. In terms of our definition of policy issues, both points refer to the entire category of children's television advertising rather than to subcategories or to specific advertising practices. This is consistent with the FCC's self-designated role (Steinberg, 1974) of concern with program content and the relationship of commercials to programs (the volume and separation issues above) rather than the content of the commercials. Incredibly, the FCC's policy proposal to reduce advertising volume on children's programs has received an indirect snub from an unexpected quarter. The U.S. Department of Justice in 1979 filed suit against the National Association of Broadcasters (NAB) seeking to remove self-regulatory limits on the number of commercials that can be broadcast per hour, charging that such limits may drive advertising prices up and restrict competition.

The interesting aspect of these two policy issues from the standpoint of our analytical framework is that neither the FCC in making these policy statements nor the NAB in enacting them gave concrete reasons for reducing children's advertising volume or for trying to separate commercials more clearly from programs. The two policy issues are, therefore, based merely on value judgments about what is "proper" conduct (unfair means). It is equally surprising that neither action has been challenged in serious fashion

by advertisers or broadcasters demanding to know what harmful *effects* result from advertising volume or lack of clear separation from programs.

The 1977 National Science Foundation Report

The NSF Report, as it has come to be known, reviewed policy-related statements from federal, industry, and consumer group sources and arrived at a summary list of 10 policy issues (Adler, Friedlander, Lesser, Meringoff, Robertson, Rossiter, & Ward, 1977). It may be noted, in connection with the definition of policy issues earlier, that the first five issues concern specific advertising practices; the next two concern large subcategories of advertising; and the last three concern children's television advertising in general (see Table 2). In what follows I will describe these issues, placing them in the analytical framework I have developed.

Program-Commercial Separation. The issue of program-commercial separation originated with the FCC and was adopted as a self-regulatory issue by the NAB. Recently, mainly through FTC action, this issue has expanded from its original focus on children's ability to distinguish advertising material from nonadvertising material to the more complex issue of whether, or at what age, children can not only recognize commercials but also understand their ostensible intentionality, that is, advertising's persuasive or selling intent. The FTC, as we shall see below, has recently advanced a complex argument linking this issue to others. As it stands, however, the program-commercial separation issue is basically one of alleged *unfair means*. In other words, according to the FCC, NAB, and FTC, children "should" be able to understand the difference between programs and commercials and, in the FTC's view, also understand that a persuasive attempt is being made. While the question of whether, or at what age, children can reliably exhibit these types of understanding is an empirically researchable one, note that the central proposition of the issue is not. The proposition, essentially, is that children should not be persuaded "without their awareness"—a value judgment about unfair means.

Format and Audiovisual Techniques. The basic concern underlying this issue is that various particular advertising formats and audiovisual techniques may mislead children. For example, particular wording in product claims, special sound effects, or special angles in photography may lead children to develop beliefs about the appearance, performance, or associated characteristics of the

TABLE 2
POLICY ISSUES IDENTIFIED IN THE 1977 NSF REPORT AND THEIR STATUS RELATIVE TO THE FTC PRESIDING OFFICER'S RECOMMENDATIONS

NSF Report: Issue and Scope of Issue	Policy Category	FTC Presiding Officer's Recommendations
A. Specific advertising practices		
1. Program-commercial separation	Unfair means	Subsumed in Issue 1 (selling intent)
2. Format and audio-visual techniques	Misleading	Subsumed in Issue 2 (ability to defend against specific techniques)
3. Source effects and self-concept appeals	Unfair means; misleading	
4. Premium offers	Unfair ends	
5. Violence and unsafe acts	Unfair ends	
B. Subcategories of advertising		
6. Proprietary drug advertising	Misleading; unfair ends	Judged a nonissue because not "children's advertising"
7. Food advertising	Misleading; unfair ends	Partially subsumed in Issue 3 (effects of sugared food advertising)
C. Advertising in general		
8. Volume and repetition	Unfair ends	Not directly addressed but would be affected by ban(s)
9. Consumer socialization	Unfair ends	Judged a nonissue because effects too tenuous
10. Parent-child relations	Unfair ends	Judged a nonissue because effects too mild

product that are factually untrue. Many such instances of false beliefs have been empirically verified in NAD hearings and in FTC actions against individual advertisers. Obviously it is not feasible to conduct empirical tests in every particular instance, so policymakers, in this case the NAB and the NAD, have tried to identify classes of advertising techniques that are likely to produce misleading effects. Misleading children, intentionally or otherwise, is universally held to be unfair, so unfairness becomes an assumed characteristic. The correctness of their identification is, however, disputable and open to empirical verification that the techniques

do mislead. The issue is therefore placed in the policy category of *misleading* advertising.

Source Effects and Self-Concept Appeals. Two related policy issues are actually subsumed here, as noted in the NSF report. The first is that certain types of product presenters and characters, such as celebrities or authority figures, are restricted from appearing in children's commercials because they presumably represent means of trying to persuade children that are "too powerful" or that are not based on the intrinsic merits of the product. The prohibition against these spokespersons clearly centers on *unfair means*—a value judgment. The second issue concerns appeals to children's self-concepts, for example, that by having the product they can emulate the skills of the presenter or otherwise derive personal benefits. These claims or suggestions may not be empirically valid and so the child may be misled. Accordingly, self-concept appeals can be placed in the policy category of *misleading* advertising.

Premium Offers. The critical policy dispute over the use of premium offers in children's television advertising is that they may lead children to want products for the "wrong" reason. It is not that children are led to believe anything false or different about the product. The crux of the issue is that children are making "poor" choices, not "false" ones. This is, obviously, a value judgment, and the premium issue is best categorized as involving *unfair ends.*

Violence and Unsafe Acts. Policy prohibiting violent portrayals or the depiction of unsafe behavior in children's commercials at first appears to require the empirical demonstration that violent portrayals cause aggressive behavior and that unsafe act depictions cause unsafe imitative behavior. However, no deception is involved and empirical tests are generally precluded by the value judgment that one cannot ethically test for (presumed) effects which include dangerous behaviors. Consequently, policymakers have made a value judgment about the *risk* of effects that does not depend on empirical proof and therefore reduces to a value judgment about *unfair ends.*

Proprietary Drug Advertising. Proprietary drug advertising is the first of two policy areas in which entire product categories, rather than particular advertising practices, are at issue. Analysis of the charges that led to prohibition of proprietary drug advertising directed to children or broadcast during children's programs reveals that there are two types of alleged effects: (*a*) that proprie-

tary drug advertising may foster in children unrealistic beliefs about the efficacy of common medicines; and (*b*) that proprietary drugs are not products about which children should be making usage decisions including influencing their parents' decisions. In the first instance, the factual nature of beliefs brings the issue into the policy category of *misleading* advertising. In the second instance—since the products or their conditions of use are not themselves illegal—this policy issue can be viewed as centering on *unfair ends*, as well as involving to some extent the alleged misleading aspect just outlined.

Food Advertising. Food advertising (including beverages and snacks) is the second policy issue that pertains to an entire subcategory of children's television advertising. It has been alleged by consumer advocacy groups such as ACT and CCMM that the types of food products advertised to children represent only a limited range of "suitable" foods and that, due to the effectiveness of the advertising, children's dietary and nutritional values and behaviors are being biased toward these foods. This allegation falls into the policy category of *misleading* advertising in that children are being led to falsely believe, according to medical evidence, that these foods alone constitute an appropriate dietary and nutritional intake. The proposition here is clearly empirical in nature and depends on factual evidence.

There is a related allegation that pertains to "heavily sugared" foods, a subdivision of the subcategory "food advertising." Here the policy emphasis shifts to *unfair ends*. It is alleged, by the FTC as well as consumer advocacy groups, that consumption of heavily sugared foods is per se undesirable because of the risk of dental and other problems and that advertising, even if it is not false, misleading, or unfair in its presentation, should not be allowed to contribute to this undesirable behavior. The food advertising issue is a major part of the FTC's current policy position, and I shall return to this issue in the next two sections.

Volume and Repetition. This and the next two policy issues apply to children's television advertising in general rather than to specific advertising practices or subcategories of advertising. There has been a long-standing contention, by consumer advocacy groups in particular, that there is "too much" advertising directed to children and that the commercials are repeated "too often." These value judgments have been acted on by the FCC and the

NAB in that both the amount of commercial time per hour and the number of times an individual commercial can be shown per hour during children's programs have been reduced over the past several years. The ABC television network has instituted a further voluntary reduction in children's advertising time. Concerns about too much volume and too much repetition place this issue in the *unfair ends* category. The fear seems to be that children will become "too persuasible." While this is an empirically testable proposition, no deception or misleading effects have been alleged, nor have policymakers such as the FCC and the NAB taken the empirical evidence on volume, repetition, and persuasibility into account (Rossiter, 1979). The restrictions on volume and repetition are simply value judgments.

Consumer Socialization. A frequent charge against children's television advertising in general is that it fosters undesirable values in children, with materialism most often cited as an example. Defenders of children's advertising, in contrast, claim that positive socialization effects occur, such as the development of knowledge about the economic marketplace. They also suggest that children's experimentation with minor purchases based on advertising may even provide valuable inoculation against the real-world vicissitudes of sales transactions. Whichever position is true—and both, of course, may be—the debate centers on the appropriateness of these values for children. Accordingly, the consumer socialization issue is most clearly categorized as involving *unfair ends.*

Parent-Child Relations. This, the last of the major policy issues, also pertains to children's television advertising in general. In formal terms, this issue is identical to the previous two: That is, an empirical effect is alleged, but it is not an effect that can be categorized as true or false, so the misleading category does not apply. Rather, the effect is considered to be undesirable, so that the applicable category is *unfair ends.* In this instance the unfair ends consist of conflict between parents and children which may result when children ask for products they have seen advertised on television.

The 1978 FTC Staff Proposals

In 1978 an advisory staff of the Federal Trade Commission prepared three proposed regulations for children's television advertising policy. These proposals were launched under the expanded

authority given the Commission by the Magnuson-Moss Act of 1975, which legally allows it to regulate entire industries, such as children's television advertising, instead of proceeding on a case-by-case basis with individual companies. The source for these proposals was petitions to the FTC, filed in 1977 by two consumer advocacy groups, Action for Children's Television and the Center for Science in the Public Interest. In response to these petitions, the FTC Advisory Staff proposed the following items of policy:

1. A total ban on television advertising directed to children "too young to understand the selling purpose of, or otherwise comprehend or evaluate" commercials [Federal Trade Commission Advisory Staff, 1978, P. 10], tentatively identified as referring to children below 8 years of age.
2. An additional ban on television advertising for "sugared products, the consumption of which poses the most serious dental health risks [Federal Trade Commission Advisory Staff, 1978, p. 11]," directed to older children, tentatively identified as being ages 8-11.
3. A requirement that television advertising directed to older children for sugared products not included above (proposal 2) be "balanced by nutritional and/or health disclosures funded by advertisers [Federal Trade Commission Advisory Staff, 1978, p. 11]."

The first policy proposal is an extension of the program-commercial separation issue. The underlying proposition is that it is unfair to advertise to children who are not cognitively aware of what an advertisement is nor of its purpose. As noted, this is an *unfair means* issue. The second policy proposal is the same as the second aspect of the food advertising issue. The alleged effects of such advertising are to encourage consumption of heavily sugared foods which in turn will lead to dental health problems. As noted, this is an *unfair ends* issue. The third policy proposal is related to the first aspect of the food advertising issue. The proposition here is that required disclosures about nutritional and health considerations in consuming sugared foods would help to offset children's purportedly false beliefs about these foods. This issue is therefore a proposed "remedy" for an implicit allegation of *misleading* advertising on the part of sugared food manufacturers.

The FTC Advisory Staff's broad proposals, which not surprisingly generated much controversy among the publicly significant parties in the children's television advertising arena, formed the basis for public hearings held early in 1979. The FTC Presiding Officer, Judge Morton Needelman, after reviewing extremely detailed testimony on these and other matters by representatives of the various parties, recently issued recommendations concerning, in his view, disputed issues and non-disputed issues in the controversy. As we shall see, the FTC's proposals are modified in the presiding officer's recommendations.

The FTC Presiding Officer's Recommendations

From the point of view of the probable course of policy determination, *if* the FTC's authority is not weakened by the threat of congressional veto (a proposal to allow Congress veto power over the FTC is currently before the U.S. Senate) nor removed by passage of the bill, the FTC presiding officer's recommendations are the most important policy-relevant statements yet to emerge. Even more important, of course, will be his final recommendations based on the response to the hearings and the FTC Commissioners' findings, which are not expected until the early 1980s. However, the present recommendations are likely to determine what will be pursued as policy issues by the FTC and what will not, and so it is worthwhile to examine both sets of issues here.

Issues That Will Be Pursued. The FTC presiding officer took the first two policy proposals of the FTC Advisory Staff and transformed them into three related issues. Those issues are stated, verbatim, here [Federal Trade Commission, 1979, pp. 6-7, emphasis added]:

1. To what extent can children between the ages of 2 and 11 distinguish between children's commercials and children's programs to the point that they *comprehend the selling purpose* of television advertising aimed at children?
2. To what extent can children between the ages of 2 and 11 *defend against persuasive techniques* used in these commercials, such as fantasy or cartoon presenters, premiums, limited information, and various associative appeals?
3. What *health effects*, actual or potential, attach to any proven lack of understanding or inability to defend against persuasive techniques?

The three issues are related because, according to the presiding officer's supporting arguments, they form a hierarchy. My interpretation of this hierarchy is shown in Table 3. The first two issues are called "cognitive issues" by the presiding officer. One reason for this, as shown on the right-hand side of the table, is that they may be deemed sufficient to justify regulation *even if they do not have any behavioral consequences*. Note that "psychological consequences" are not considered. These two issues rest simply on value judgments about *unfair means* of advertising to children. Note, further, the potential enormity of the scope of these two cognitive issues because of the hierarchical argument. This argument says, in effect, "If lack of understanding of selling intent is not a sufficient reason to warrant an unfair means ruling, let's try the stiffer criterion of inability to defend against persuasive tech-

TABLE 3
THE AUTHOR'S INTERPRETATIONS OF THE POLICY IMPLICATIONS OF THE FTC PRESIDING OFFICER'S RECOMMENDATIONS

A. *"Cognitive" issues*		
1. Substantial empirical grounds for young children's lack of understanding of *selling intent?*	Yes →	Possible ban by age group on the basis of *unfair means.*
↓ No		↓ No
		(See B)
2. Substantial empirical grounds for children's ability, even if they understand selling intent, to defend against persuasive techniques?	Yes →	Possible ban by age group on the basis of *unfair* means.
↓ No		↓ No
(Terminate)		(See B)
B. *"Effects" issue*		
If the unfair means (of persuasion) basis is not judged sufficient o jsutify either of the above bans:		
3. Substantial empirical grounds for attributing (*a*) false beliefs about; or (*b*) excessive behvior resulting in sugar consumption, to children's lack of understanding (All or inability to defend (A2)?	Yes →	Possible ban by age group on the basis of (*a*) misleading advertising: or (*b*) unfair ends.
↓ No		
(Terminate)		

niques." These unfair means tests, especially the latter, could eliminate television advertising to nearly all children up to age 11, depending on how "inability," "defenses," and so on are defined.

If unfair means are not judged later by the presiding officer nor by the FTC commissioners to alone be sufficient to justify regulation, then the third issue states that effects or ends may be examined. The "effects issue" as the presiding officer calls it, does not refer to all children's television advertising as the first two do, but only to sugared food advertising. Note that it does not make the tenuous distinction between "heavily sugared" foods and "other sugared" foods as the FTC Advisory Staff proposal did. Rather, the onus is shifted entirely to effects. Note, secondly, that it refers to *potential or actual* physical harm. The concept of potential harm includes "beliefs about sugared food consumption . . . that are contrary to . . . generally accepted professional, medical, and dental opinion . . . [Federal Trade Commission, 1979, p. 9]." These would be, ostensibly, false beliefs, and so this part of the issue can be categorized as concerned with *misleading* advertising. Actual harm, on the other hand, as exemplified by dental cavities, can be placed in the *unfair ends* category.

Issues That Will Be Pursued Further. The FTC Presiding Officer's recommendations are informative in identifying (in his opinion) not only disputed issues for further research and debate but also issues not in dispute and therefore not worth further pursuit by the FTC. These undisputed issues range from narrow to broad in scope, and only a selective list of (in my opinion) the five major ones is presented below. All quotations are from the FTC Presiding Officer's recommendations (Federal Trade Commission, 1979):

1. That television advertising that is not specifically designed for or directed to children is not at issue (cf., the proprietary drug advertising issue, where children are exposed to adult-oriented proprietary medicine advertising).
2. That television advertising directed to children "does what it is intended to do. It persuades children to ask for the products advertised [p. 18]." (Note that this conclusion is relevant only to the "effects" issue and that it does not cover the issue of whether false beliefs are among the effects.)

3. That some parent-child conflict does result from children's television advertising but that this conflict is "generally not especially severe nor longlasting [p. 19]."
4. That "overconsumption" of sugar contributes to the formation of dental caries and to obesity but not, at least according to the present weight of evidence, to coronary heart disease, diabetes, cancer, or hypertension.
5. That it has not been established that children's television advertising results in "significant psychological harm, unrealistic materialistic notions, or overstimulation of desires [p. 20]."

Because of the previous emphasis placed on the issues identified in the NSF Report and because these issues may continue as a basis for self-regulatory policy should the FTC's current endeavors be blocked or voluntarily terminated, it is useful to summarize their status vis-à-vis the FTC presiding officer's recommendations. As indicated in Table 2, Issues 6, 9, and 10 from the NSF Report were judged to be nonissues while Issue 8 was not directly addressed in the presiding officer's comments. The remaining six issues are subsumed in the three disputed issues identified by Judge Needelman; specifically, NSF Issue 1 is subsumed under "comprehending the selling purpose," NSF Issues 2-5 are subsumed under "defending against persuasive techniques," and NSF Issue 7 is partially subsumed under "health effects."

THE STATUS OF RESEARCH

It should be apparent that most of the policy issues described in the second part of this chapter involve complex combinations of empirical research evidence and purely ethical value judgments. The analytical framework which identified the four policy categories of false advertising, misleading advertising, unfair means, and unfair ends merely shows the locus of the major policy decision in each case. As a prelude to this section which discusses the contributions and limitations of research as an input to policy decisions, it may be instructive to consider the complexity in this respect of the FTC Presiding Officer's third issue (Table 4). Even if research evidence were forthcoming on all of the hypothesized linkages in the causal chain needed to support this issue *empirically*, it should

be clear that a final policy decision will depend on an even more intricate set of value judgments. Obviously, research makes a necessary contribution here, but research alone cannot decide policy.

Contributions of Research

Empirical research can contribute to each of the four policy categories I have included in the analytical framework (see Table 1). First, it can establish or refute matters of fact, although value judgments are still needed. Second, it can reduce some of the arbitrariness in value judgments, but it cannot replace them. In the next four sections I will illustrate these two principles for the four categories.

False Advertising. Research can help in false advertising determination by providing evidence against the allegedly false practice. This is usually "laboratory" research, for example, to investigate a claim that a battery in a child's toy will last for 100 hours of use. It may, however, sometimes involve consumer research, for example, to investigate a claim that a new toothpaste will reduce cavities in childhood to a significantly greater extent than presently available toothpaste.

Misleading Advertising. Research is instrumental in supporting or refuting allegations of misleading advertising. Such advertising does not necessarily involve false claims, and often it is unintentional on the part of the advertiser. Most of the cases that come before the self-regulatory Children's Advertising Review Unit of NAD are of this nature, as are many FTC-initiated cases. Often, research evidence is submitted by the advertiser to show that the advertising is not misleading to children. Occasionally, though, the advertiser's research findings are used to support the regulatory allegation or else the regulatory agency will conduct its own research to investigate the issue.

Unfair Means. This is the policy category where research is least relevant in a direct sense because nothing has to be demonstrated other than the fact that the advertiser (or category of advertising) is using the means in question. Research can, however, be relevant *indirectly* by reducing some of the arbitrariness in the value judgments about unfair means (principle 2, above). For example, the NAB and the NAD, both of whose codes prohibit "host selling," presumably surveyed or polled their executive board members'

opinions in deciding on this prohibition. This "research" procedure could become more formal by conducting a similar survey of other publicly significant parties such as psychologists and parents. This in itself reflects the value judgment that value judgments should be more democratic.

Unfair Ends. Research is involved in the determination of unfair ends in that it has to be proven that advertising is indeed a cause of the effects. The proprietary drug advertising and food advertising issues are cases in point. The primary locus of the policy decision, however, is on the value judgments concerning the effects themselves, for example, whether or not it is desirable for children to be making decisions about proprietary drugs, whether sugar consumption and its physiological consequences are bad, and so on. Here too, though, research can be employed in its indirect role for polling the value judgments of publicly significant parties.

Limitations of Research

In attempting to define the concept of a policy issue at the outset of this chapter, I commented that value judgments are intrinsic to every policy issue—even those which seem to depend on "hard facts." Herein lies the essential limitation of empirical research. Research is itself a value-laden activity. This point will be illustrated briefly below in conjunction with the four policy categories.

False Advertising. Sometimes falsehoods are permitted in advertising because they are evaluated as justifiable. An example is the use of shaving cream in food advertising as cited earlier. Research is irrelevant to this type of false advertising issue. Another example is nonabsolute claims alleged to be false, for example, that a children's cereal contains "significantly more vitamins" than other brands. The word "significant" has to be interpreted, and this is a value judgment which research cannot provide.

Misleading Advertising. The limitations of research are even more apparent in the second of the "factual" categories, that of misleading advertising. Arbitrary judgments have to be made about the extent of untruth that constitutes "misleading," either in terms of degree of falsehood, number or proportion of children misled, or both. Also, in some instances children (and adults) may even, in some people's view, be "benevolently misled." It is well known, for example, that many common medicines work, for many people, largely through a placebo effect based on the subjec-

TABLE 4
ILLUSTRATION OF THE ROLES OF RESEARCH EVIDENCE AND VALUE JUDGMENTS IN THE FTC'S PRESIDING OFFICER'S FOOD ADVERTISING "EFFECTS" ISSUE

Empirical causal chain

	A1: Lack of understanding of selling intent		B1: False beliefs about sugared foods		C1: Dental caries
Children's food advertising	→ *or*		→ *or*		→ *or*
	A2: Inability to defend against persuasive techniques		B2: Overconsumption of sugared foods		C2: Obesity

Research evidence needed on causal relationship between:

1. A1 and B1
2. A1 and B2
3. A2 and B1
4. A2 and B2
5. B1 and C1
6. B1 and C2
6. B1 and C2
7. B2 and C1
8. B2 and C2
8. B2 and C2
9. A factors as mediating causes between advertising and B factors factors
10. B factors as mediating causes between A factors and C factors

Value judgments required:

A1: 1. Definition and measure of "understanding of selling intent"
2. Judgment of "substantial proportion" of children who reveal lack of understanding

A2: 3. Definition and measure of "ability to defend against persuasive techniques"
4. Similar to 2

B1: 5. Selection and measures of beliefs about sugared foods
6. Judgment about how deviant beliefs must be from fact to be considered mistaken or false

B2: 7. Measure of sugar consumption
8. Judgment about what level of consumption constitutes "overconsumption"

C1: 9. Measure of dental caries

C2: 10. Definition and measure of "obesity"

General: Selection of appropriate sampling design, tests, and significance levels for establishing causal relationships specified in 1-10 at left.

tive belief that the medicine will work (Bishop, 1977). Still another form of misleading advertising that is tolerated as not being unfair is "puffery." Thus, in policy, there are fair untruths and unfair untruths, where our two dimensions of facts and values coalesce.

Unfair Means. As noted above, research faces its greatest limitations in the policy category of unfair means. Research, for example, cannot decide whether it is a good or bad thing for children to be exposed to various selling techniques or for children to be persuaded or to want various advertised products. The limitations of research are especially apparent when the unfair means allegation is not tied to any alleged unfair *consequences.* Prime examples are the FTC presiding officer's "cognitive" issues, which simply state that children *should* be aware of selling intent and *should* be able to defend against persuasive techniques, even if no "harm" can be shown to result from lack of these factors. One could ask, as many industry representatives have, whether the unfair means concept (without unfair ends) is itself a fair basis for regulating children's television advertising.

Unfair Ends. Jacoby and Small (1975) have presented a sophisticated analysis of the value judgments involved in unfair ends policy issues. The critical considerations are (*a*) what is the probability of occurrence of the effect; and (*b*) how serious or harmful is the effect? Overall "risk" or potential unfairness might then be calculated as a function of (*a*) x (*b*), though even the appropriateness of this formula is a value judgment. Unfair ends policy issues, as exemplified by the FTC Presiding Officer's "effects" issue pertaining to sugared food advertising, utilize research but depend in the ultimate sense on value judgments.

SUMMARY AND OUTLOOK

In this chapter I have tried to get at what a policy issue really is and to analyze the bases for policy issues in children's television advertising. I have stressed, with many examples, the fact that policy determination depends vitally on the ethical values of publicly significant parties. With this in mind, I would like to conclude with some personal observations about this system and about the future directions that I think children's television advertising policy should take. These observations are three-fold: (*a*) because children's television advertising policy depends so heavily on ethical

values, these values should be more ethically—or I should say democratically—decided on; (*b*) the "unfair means" category of policy issues should be eliminated unless "unfair ends" are proven to result; (*c*) we should be as willing to dismantle policy as to add to it. Research plays a role in each of these observations as, inevitably, do values.

The Meta-Value: Who Shall Decide?

A number of publicly significant parties are involved in children's television advertising policy determination: Children, parents, child development experts, advertisers, consumer advocates, and federal officials. However, the major short-run decisions are in the hands of federal officials, notably the FTC. The meta-value judgment I would like to apply here is that values should be represented more democratically. For the present and the immediate future, in my view, the FTC's values are not appropriately representative. I would like to see systematic research into the relevant value systems of the various parties and an adult public referendum taken about whose values should receive what weight in the overall decisionmaking regarding children's television advertising policy.

Unfair Means Alone Should Not Be a Basis for Policy

The unfair means category, in the absence of unfair ends, has always seemed to me to be an indefensible basis for imposing policy. My own inclination is toward Bertrand Russell's (1954) ethical principle that nothing should be censored unless it can be demonstrated to have consequences that are harmful to others. This viewpoint would make it incumbent on the FTC and on self-regulatory agencies to demonstrate that children's lack of understanding of advertising or inability to defend against persuasive techniques has empirical consequences that we can measure and evaluate. In the absence of these consequences, censorship—in the form of restrictions, bans or whatever—seems pointless. Note that I am proposing a critical task for research, to demonstrate that given means cause given ends, and for value judgments, to decide the ethical status of the ends. The paramount value judgment, however, is whether means should be considered if they cannot be demonstrated to have consequences.

Policy Should Be Reduced and Not Just Added To

There are policies currently in force in children's television advertising which appear to have very little evidentiary justification. This

is especially true if we eliminate the vacuous unfair means category from policy and concentrate on false advertising, misleading advertising, and advertising shown to produce effects which publicly significant parties deem unfair. To cite a few examples (others can be found in the Adler *et al.*, 1980 review) in which research so far has produced no supporting evidence: The helpfulness of program-commercial separation devices (see also a recent study by Palmer & McDowell, 1979); the effectivenss of host versus nonhost selling; the extent to which premium offers mislead children; the deleterious effects on children of proprietary drug advertising; and the relationship between the ability to understand selling intent and persuasibility. Of course, one might argue that it is impossible to prove null hypotheses and that research someday might find these alleged effects. This "potential" risk argument is in itself a major value judgment. My point is that if we are going to look to research to confirm our fears about what television advertising is doing to children we should also look to research to dispel these fears. So far we have not done this. We have added to policy but rarely dismantled it.

Children's television advertising policy remains a complex area which leaves few people satisfied. By examining more closely what each policy issue entails, we may arrive at policy decisions on a more reasonable and hopefully more satisfactory basis. I have tried to illustrate this process, using recently past and current policy-making and research as the basis for the analysis.

REFERENCES

Adler, R. P., Friedlander, B. Z., Lesser, G. S., Meringoff, L., Robertson, T. S., Rossiter, J. R., & Ward, S. *Research on the effects of television advertising on children*. Washington, D.C.: United States Government Printing Office, 1977.

Adler, R. P., Lesser, G. S., Meringoff, L. K., Robertson, T. S., Rossiter, J. R., & Ward, S. *The effects of television advertising on children*. New York: Lexington, 1980.

Ayer, A. J. *Language, truth and logic* (2nd ed.). London, United Kingdom: Gollancz, 1936, 1960.

Bishop, J. E. Placebos are harmless, but they work, posing problems for medicine. *The Wall Street Journal*, 1977, 140, 1, 33.

Durkheim, E. *The elementary forms of religious life*. New York: Macmillan, 1915.

Federal Communications Commission. Children's television programs—

report and policy statement. *Federal Register*, 1974, 39, 25505-25510.

Federal Trade Commission Advisory Staff. *FTC staff report on television advertising to children*. Washington, D.C.: Federal Trade Commission, 1978.

Federal Trade Commission. *Presiding officer's order no. 78: Certification to the commission of recommended disputed issues of fact*. Washington, D.C.: Federal Trade Commission, 1979.

Gardner, D. M. Deception in advertising: A conceptual approach. *Journal of Marketing*, 1975, 39, 40-46.

Jacoby, J., & Small C. The FDA approach to defining misleading advertising. *Journal of Marketing*, 1975, 39, 65-73.

National Association of Broadcasters. *Children's TV advertising*. Washington, D.C.: NAB Code Authority, periodically issued.

National Association of Broadcasters. *The television code* (18th ed.). Washington, D.C.: NAB Code Authority, 1975.

National Advertising Division, Council of Better Business Bureaus, Incorporated., Children's Advertising Review Unit. *Children's advertising guidelines* (Rev. ed.). New York: Council of Better Business Bureaus, Incorporated., 1977.

National Advertising Division, Council of Better Business Bureaus, Incorporated, *A four year review of the Children's Advertising Review Unit: June 1974 through June 1978*. New York: Council of Better Business Bureaus, Incorporated, 1979.

Palmer, E. L., & McDowell, C. N. Program/commercial separators in children's television programming. *Journal of Communication*. 1979, 29(3). 197-201.

Robertson, T. S., Rossiter, J. R., & Gleason, T. C. *Televised medicine advertising and children*. New York: Praeger, 1979.

Rossiter, J. R. *Facts and values in children's advertising regulation*. Paper presented at the Fifth Annual Telecommunications Policy Research Conference, Airlie, Virginia, 1977.

Rossiter, J. R. Does TV advertising effect children? *Journal of Advertising Research*, 1979, 19(1), 49-53.

Russell, B. *Human society in ethics and politics*. London: George Allen & Unwin, 1954.

Steinberg, M. S. The FCC as fairy godmother: Improving children's television. *UCLA Law Review*, 1974, 21, 1290-1338.

CHAPTER 7

Identification and Imitation in Children

MARTIN HOFFMAN

MARTIN HOFFMAN

Identification and Imitation in Children

In this review I shall attempt to cover the major theories of identification and imitation, and to summarize and critically evaluate the pertinent empirical research.

IDENTIFICATION

Many students of human development have assumed, since Freud, that parent identification is a central, all-encompassing process in personality development. As noted by Bronfenbrenner (1960):

> Freud was not asking why and how a child might learn an isolated piece of behavior from his parent. He was interested in what he felt to be a more sweeping and powerful phenomenon—the tendency of the child to take on not merely discrete elements of the parental model, but a total pattern. Moreover, as Freud saw it, this acquisition was accomplished with an emotional intensity which reflected the operation of motivational forces of considerable power.

The question that has intrigued most writers on identification is, just what is the nature of the motive that impels the child to emulate the parent model. The psychoanalytic tradition has stressed two basic motives: the first is the child's anxiety over losing the parent's love. To get rid of this anxiety and assure himself of the parent's continued love, the child strives desperately to be like the parent in every way—to adopt, for example, the parent's behavioral mannerisms, thoughts, feelings, and even the capacity to punish himself and experience guilt when he violates a moral standard.

This process—sometimes called anaclitic identification—is viewed as contributing to lasting developmental changes in the child.

These include the changes associated with acquisition of an appropriate sex-role identity. It is also often assumed that by adopting the parent's evaluative orientation with respect to the parent's own behavior, the child eventually stops striving only for impulse gratification and, since the parent's orientation derives from his cultural group, the child internalizes the standards of the culture; identification thus contributes to an internalized conscious. In some re-formulations, in which the stress is more on the child's love for the parent model than on the threat of loss of love, the terms used are developmental identification, or emotional identification.

The second basic motive, which is derived from Freud's notion of castration anxiety, is fear of physical attack or punishment by the parent. Toward the end of the preschool period, as part of the Oedipus conflict, the boy comes to see his father as a potential source of punishment for his erotic feelings toward his mother (the process is fully worked out only for boys). The resulting "identification with the aggressor" or "defensive identification" is currently seen by most writers as making a possible contribution to aggressive behavior but not to positive socialization, or it is seen as being nothing more than a transitory defense mechanism.

Theorists of other, nonpsychoanalytic persuasions have suggested that the child tries to emulate the parent not to avoid anxiety but as a means of acquiring certain highly desirable characteristics of the parent such as (a) the privileges and satisfactions that he has (e.g., the love received from the other paret), (b) his effective mastery over the environment which enables him to control resources and satisfy his own needs, and (c) his power and control over the child. A self-reinforcing process is often postulated by these writers: the child fantasizes himself as the model who controls and consumes the valued resources that the child lacks. The child then acts like the model and the resulting similarity that he perceives between himself and the model is reinforcing because it signifies that he may attain the model's desired goal states.

Despite the assumed importance of identification, there is a lack of systematic empirical research on its antecedents and consequences. Scattered support does exist, however, for the view that identification is fostered both by parental affection toward the child and,

at least in boys, by parental power and dominance (e.g., Hetherington, 1965). There is also evidence that identification may contribute to the child's acquisition of (a) culturally approved sex-typed preferences and behaviors (e.g., Mischel, 1970) and (b) certain aspects of morality that are reflected in the parent's words and deeds, such as moral reasoning and helping others (Hoffman, 1971, 1975). On the other hand, there appears to be a lack of consistency among the presumed products of identification, for example, children who obtain high scores on indices of appropriate sex-role identity do not necessarily obtain high scores on indices of moral conduct (Mischel, 1970). This suggests that identification is not an all-encompassing unitary process. The research also suggests that identification may bear little or no relationship to an important index of the presence of a conscience: experiencing guilt feelings over violating moral standards (Hoffman, 1971). This may reflect the fact that parents do not often express guilt feelings openly and thus do not provide the child with a model of self-criticism and guilt; it may also be due to the child's lack of both the experience and the cognitive skills needed to infer inner states from overt behavior.

In conclusion, the parent is obviously an ever-present, emotionally significant figure in the young child's life, as well as the major model of social norms to which he is exposed. Some sort of identificatory process with regard to the parent may therefore be expected to operate and play an important role in the child's socialization. The research thus far, though sparse, appears to provide some slight support for this expectation with regard to overt behaviors, verbalized preferences, and attitudes. Further research is needed, however, before a more definitive statement can be made about the importance of identification in the development of guilt feelings and perhaps other inner states associated with socialization.

THEORIES OF IMITATION

Psychologists and sociologists around the turn of the century attributed imitation to instinctual origins because of its pervasiveness in different cultures, (e.g., James, 1890; Tarde, 1923). In general, instinct theory assumed that imitation occurred without conscious intentions; it was rather an involuntary, reflexive type of action that few people could resist when exposed to social stimuli.

Instinct explanations of imitation behaviors fell into disrepute in the 1920s and 1930s, with the rise of behaviorism and the increasing evidence that most of human social behavior was learned. In 1941 Miller and Dollard advanced a learning theory of matched imitative behavior and conducted a series of experiments to support the theory. Little was done after that until the 1960s when Bandura and his students began to develop a comprehensive social learning theory of imitation and to conduct dozens of studies which seemed to follow from it. Cognitive developmentalists have begun to theorize about imitation only recently, although Piaget did have something to say about the topic much earlier.

Social Learning Theory of Imitation

Social learning theorists have criticized the psychoanalytic conception of identification for lacking precision, not lending itself to empirical study, and focusing exclusively on early childhood and the importance of one model, the parent. These writers, notably Bandura (1969a), view identification as a continuous process through life in which new responses are acquired and behavioral repertoires modified owing to exposure to, and imitation of not only the parent but a wide variety of models whose attitudes, values, and social responses are exemplified behaviorally or in verbally coded forms. Bandura's primary contribution has not been to elucidate the child's motives for emulating the model but in providing a perspective on the cognitive processes involved in imitation which had been neglected in previous formulations. These processes follow logically from an analysis of what might occur in the observer to enable him to reproduce a model's complex behavior later on in the model's absence. They include (1) attending to the particular aspects of the model's behavior to be emulated; (2) coding these aspects of the model's behavior into symbols that can be stored; (3) retention, which is aided by proper visual and especially verbal coding and sometimes by rehearsal; and (4) eventually recoding the stored information and (5) using the resulting codes as a guide for enacting the behavior in an appropriate situation in the model's absence.

Steps 1 and 2 constitute what Bandura calls the *acquisition* or learning phase of imitation. Influential in this phase are the properties of the model which signify the extent to which the observer is likely to be reinforced for imitating the model (e.g., the model's

age, power, competence, status, and gender). The greater the expected probability of reinforcement, the more likely the observer is to attend to the model and code the relevant information. Steps 1 and 2 are also influenced by the properties of the observer (e.g., the observer's level of dependency and self-esteem, his conceptual level, and especially the extent to which he has been reinforced in the past for imitative behavior). Step 5 pertains to the performance of an imitative response. Whether or not the observer performs the act acquired from the model depends on what he expects the consequences of such action to be as well as his competence (i.e., his possession of the skills needed to perform the act). The reinforcement for imitation may be direct or vicarious; and self-reinforcement is also possible. To illustrate the distinction between acquisition and performance, in one study it was found that when children watched a model being punished for a particular behavior they subsequently showed very little of that behavior in a free-play situation. When offered inducements to reproduce these behaviors, however, the children performed them with remarkable fidelity. The behavior was acquired but not performed in the first case, and performed in the second. Thus, although Bandura does not deal with motivation directly, it is the anticipation of the reinforcement consequences of imitating a model that leads a person to decide what should be coded, retained, and later possibly recoded and enacted. As a social learning theorist, however, Bandura's view is that the key factor in determining what, if any, reinforcement the observer expects, and thus whether or not he performs, is his past reinforcement history.

Cognitive Developmental Theory of Imitation

The cognitive-developmental approach, deriving from Piaget (1962) and exemplified in the recent literature by Kuhn (1973), differs from social-learning theory in several ways. First, it assumes that imitation, like other mental activities, involves an active cognitive processing of the stimuli emanating from the model. Thus the observer does not simply attend to the model and passively code the model's behavior as a guide to later action. Rather, the observer's existing cognitive structure (categories of thought) determines his very perception of what the model does. Similarly, the retention, and eventual enactment of the model's behavior in the model's absence are viewed as manifestations of the observer's cognitive structure and functioning. Second, the type of imitation

that the individual is capable of, and the aspect of the model's behavior that he can imitate, depend on his cognitive capabilities. There are, therefore, levels or developmental stages in imitation, as in other cognitive processes. For example, Piaget stresses the fact that the young infant can only imitate the model's ongoing behavior. The ability to delay an overt imitative response until some time long after the initial observation, when the model is no longer present, is a later development. It implies the ability to form an internal representation of the model, as well as to maintain that representation in memory over time and to use it as a guide to action. Third, the anticipation of external reinforcement is not a requisite for acquisition of performance of the model's behavior. Rather, the same type of intrinsic motivation that characterizes other cognitive actions (the need to make sense of one's environment) underlies imitation as well.

REVIEW OF THE RESEARCH

Before reviewing the research it may be useful to point up certain conceptual distinctions, most but not all of which are implicit in the foregoing. First there is the distinction between imitation of a model's ongoing action and delayed imitation which occurs in the model's absence. A second distinction is that between true, spontaneous imitation and what Piaget calls "pseudo imitation" or imitation by training." In the latter case an infant, for example, may be rewarded (e.g., hugged or spoken to) every time he acts in a certain way; and once that act is learned the infant can, by the use of contingent reinforcement, be taught to act that way only after the model first acts that way (like teaching a dog to "shake hands").

The distinction must also be made between imitation in which the response is novel, and that in which the response is already within the observer's repertoire. The former is often called "observation learning" and the latter, "facilitation" or "contagion." Imitation may also contribute to the inhibition of an act which would otherwise be expressed or to the disinhibition of an act which is in the observer's repertoire but ordinarily not expressed.

A final distinction worth making rests on the nature of the motive underlying the imitation. Most of the research has dealt with imitation based on two broad classes of motives. In one, which relates to competence or problem solving, the observer imitates the model in order to acquire knowledge or learn skills. In

the other, the observer imitates the model because of the quality of the emotional relationship (e.g., the attachment) that may exist between him and the model. The observer imitates the model because he wants to be like the model. Imitation based on the quality of the relationship is the type which is closest to identification.

Imitation in Infants

There is as yet no systematic research on imitation in children younger than two years of age. Piaget's (1962) observations of his own child are the most detailed descriptive evidence available. Piaget views the developmental changes in imitation as paralleling his postulated states of intellectual development. I will present several of the significant transition points in infant imitation.

The first evidence of imitation appears to involve direct prompting by adults. It has been widely observed that a young infant can be induced to imitate if another person mimics certain actions of the infant. For example, saying "dada" immediately after the infant said it typically results in the infant's blurting out a string of "dadas". Piaget found that an infant responds to such prompted imitation by the age of 1 to 4 months and he termed this phenomenon a "circular reaction". Another development in the infant's skill in imitating, which occurs, according to Piaget, when the infant is approximately 4 or 5 months of age, is the ability to emulate the actions of another person that are unrelated to his own momentry behavior. The imitated actions, however, are already in the infant's repertoire and contingent external reinforcement is ordinarily required to connect these actions to the model's behavior. Furthermore, the only acts that can be imitated are those which give the infant a visual impression matching the model's act (e.g., he can imitate closing a fist, but not blinking an eye). Next, Piaget observed that by about 1 year of age his children began imitating movements which cannot be seen on one's own body and acts that are not already known to the child. He observed a considerable amout of trial and error as the children attempted to imitate unfamiliar responses. By 16 months of age, Piaget's children were able spontaneously to imitate novel actions without any trial and error groping. He also observed that the children could imitate after long delays in time even when the model was not present. These findings indicated to Piaget that covert or mental images had

now replaced overt imitation as a requisite for learning. These images, thought of as covert imitative responses, could later be recalled to guide overt imitation. Their appearance marks the beginning of what may be called representational imitation.

Piaget did not observe changes in imitation in his children beyond the age of two years. It is assumed that representational imitation, which is at first undirected, casual, and probably controlled by the environment, continues to develop further and by around seven years of age has become a rather self-conscious, reasoned strategy for acquiring knowledge and solving problems.

Once past infancy our interest shifts from the exact copying or mimicry of a model, to other more complex behaviors that may result from exposure to models. These include cognitive learning, inhibition and disinhibition of aggression and other deviant acts, acquisition of prosocial behaviors, and finally, the utilization of models in clinical settings.

IMITATION AND COGNITION: OBSERVATION LEARNING

Social learning, as well as cognitive-developmental theorists now agree that the child is not a passive observer but, rather, an active cognitive processor of the model's words and actions. Indeed social-learning theorists have taken the lead in the relatively recent attempts to demonstrate that complex cognitive learning can take place when the child is exposed to a model. Literally dozens of experimental studies have been done attempting to show the effectiveness of modeling procedures in teaching a variety of language rules, abstract concepts or principles, problem-solving strategies, and creative processes. To demonstrate such cognitive learning requires evidence of generalization and transfer to novel, unfamiliar tasks and settings. Zimmerman and Rosenthal (1974) have reviewed this extensive body of research. Unfortunateley their review appears to be biased in the direction of social learning theory. That is, they tend to exaggerate the complexity of what the child learns through observing models in the various experiments, as well as the difference between the initial task and setting presumed to show generalization and transfer effects. When we examine the experiments carefully it is clear that the rules acquired are usually quite simple and the initial and posttest tasks and

settings are similar (e.g., a different room or a female rather than a male experimenter may be used; and though the test item content may differ the form of the item remains the same). Furthermore, many of the studies are not pertinent to our concerns because the subjects were not only exposed to a model but were also given direct instructions, feedback on their performance and, in some instances, they were actually told what the rule guiding the model's behavior was.

Nevertheless, some of the studies are worth mentioning because they do show that children can learn not only to mimic specific acts but to abstract rules by watching another person demonstrate a simple conceptual strategy on a variety of tasks. Thus Rosenthal and Carroll (1972) exposed seventh graders to a model who wrote and orally repeated elaborate sentences using the past perfect tense. Afterwards, there were significant increases in both complex sentences and pluperfect verbs, forms that rarely occurred before exposure to the models. Harris and Hessemer (1972) also found evidence of model-induced changes in language complexity with mono- and bilingual children. In this study the child was told to make up sentences about pictures while taking turns with a model on alternative pictures. The model's sentences varied in length and linguistic complexity. Changes in these same grammatical structures were noted in the child's subsequent speech patterns.

There is also evidence that a child's strategies for gathering information may be affected by exposure to models (Denny, 1975; Lamal, 1971; Laughlin, Moss & Miller, 1969). These studies were devoted to teaching question-asking strategies on a variant of the "twenty-questions" game using modeling procedures. Pictures were presented and the child was instructed to ask any question that can be answered by "yes" or "no" and try to guess the correct picture with the fewest number of attempts. The superior strategy—consistently used by children above the age of ten years—is to ask "constraint-seeking" questions that is, questions which eliminate more than one picture. Eight- and nine-year olds learned the constraint-seeking strategy just by watching a model ask this type of question. Six-year olds, however, did not completely learn and comprehend this strategy unless the model mentioned the rule he used to formulate questions, visually removed the pictures that were eliminated by each question from the array, and described how he was going to use the information derived from the answer

to each question. This procedure apparently made the logical implications of the model's superior questioning strategy more evident to the younger children, who were otherwise unable to abstract the rule.

All of the research just described serves to highlight the difference between the social learning and cognitive-developmental perspectives. Generally, the social learning theorists try to show that the child's cognitive structure can be altered by observing models, whereas the cognitive-developmental position is that the child's cognitive level determines the type of imitation of which he is capable. It seems clear from the findings that children can abstract simple rules by observing models, although it is questionable whether true changes in cognitive structure have yet been demonstrated in children who did nothing more than observe models. It also seems apparent that children cannot imitate a model whose actions or words are beyond their own cognitive level. As noted earlier, for example, six-year olds were unable to acquire the constraint-seeking strategy, while eight- and nin-year olds were able to do so. For an extensive review of the reserch on age differences in imitation, see Yando, Seitz, and Zigler (in press). That review documents the impact of age in general but, except for Piaget's observations and analysis of the changes in imitation during infancy, discussed earlier, the data do not as yet lend themselves to a stage theory of the qualitative shifts in type of imitation that occur with age or the motivation underlying the child's imitative responses.

Several studies have been conducted that found a child's conceptual tempo to be influenced by a model's performance (Debus, 1970; Ridberg, Parke & Hetherington, 1971). Impulsive observers became more reflective (made fewer errors and increased the time used for decision making) after watching a reflective model perform. Reflective children became more impulsive after viewing an impulsive model perform. And finally, Zimmerman and Dialessi (1973) found that children who were exposed to a model who rapidly produced ideas, thought of significantly more ideas on another task than children who were exposed to a more lethargic model. Whether these were truly creative responses is problematic.

An interesting series of experiments beginning with the investigation of Bandura and McDonald (1963) and continuing into the present have been conducted to test Piaget's assumption that the

child's progression from one moral stage to the next requires cognitive disequilibrium. The attempt in these studies was to see if the individual's level of moral reasoning could be changed by simply exposing him to models who verbalize moral judgments at higher or lower levels than his own. The social learning theorists who did most of this work expected that such exposure would produce changes, whereas cognitive-developmentalists would not ordinarily expect social influences to operate in such a direct manner. In general, these experiments did show that the subjects' moral judgments were affected by the model's verbalizations. The earlier experiments were criticized as perhaps demonstrating nothing more than momentary, specific response shifts rather than actual changes in level of moral reasoning (Turiel, 1966). The more recent research, however, does indicate that children not only shift their verbal responses in the direction preferred by the model but also increase their understanding of the principle that intentions should be taken into account when making moral evaluations of behavior. Furthermore, the effects appear to last up to a year, although not beyond that (Cowan, Langer, Heavenrich, & Nathanson, 1969; Crowley, 1968; Dorr & Fay, 1974; Glassco, Milgram & Youniss, 1970; Sternlieb & Youniss, 1975).

That mere exposure to models can produce such shifts has been interpreted as evidence against cognitive developmental theory. Another interpretation is that the children did not merely imitate the model. Rather, they knew beforehand that acts may or may not be intentional but gave intentions less weight than consequences, perhaps because the stories used, like Piaget's, portrayed more harmful consequences for accidental than for intended acts. This fits the recent evidence (Imamoglu, 1975; Rule, Nesdale, & McAra, 1974) that children as young as 5 years of age use intentions when the consequences of accidental and intended acts are equal (the modeling studies in question used older children). Repeated exposure to an adult model who consistently assigns greater weight to intentions despite the disparity in consequences might then have produced cognitive disequilibrium, or dissonance which the subjects reduced by reexamining and changing their views. This interpretation, which is consonant with cognitive developmental theory, suggests that children may sometimes be provoked to re-think their own views as the result of being exposed to a model who expresses a contrary view.

IMITATION AND AGGRESSION

The vast body of research on imitation and aggression in children has been stimulated, of course, by public interest in the possible effect on children of violence in the mass media. Many efforts have been made to determine whether children will learn aggressive acts, or whether their aggressive tendencies which are normally under control will be reduced as a result of exposure to real or symbolic aggressive acts, or whether their aggressive tendencies which are normally under control will be reduced as a result of exposure to real or symbolic aggressive models (e.g., in cartoons, movies, stories, and simulated television programs). As is widely known, several laboratory experiments do support the view that children may acquire, from even a brief period of observation, certain motoric and verbal behaviors which are associated with aggression in real-life situations (e.g., Bandura, Ross & Ross, 1961, 1963a, 1963b). In these studies subjects were exposed to live or filmed aggression scenes, then placed in a free-play situation with a variety of toys or other play materials. The results indicate that the exposure of young children to aggressive models produces increments in such play activities as punching inflated plastic clowns, popping ballons, striking stuffed animals, and operating mechanized "hitting dolls."

According to social-learning theorists, whether a model is rewarded or punished for his action should influence the degree to which the action is imitated. Applied to aggression, this means that a child who observes a model punished for aggression should show inhibitory tendencies. Following this approach, Bandura, Ross and Ross (1963b) exposed nursery-school children to films that depict an adult model employing considerable physical and verbal aggression against another adult in order to amass his possessions. Under a model-rewarded condition the aggressor successfully appropriated these possessions and rewarded himself for doing so; under a model-punished condition the aggressor received severe punishment for his behavior. Two control conditions were included: one in which the children observed the models engage in vigorous but nonaggressive play, and another in which there was no model. In a subsequent free-play situation the children who observed the model punished exhibited significantly less aggression than children who saw him rewarded. They did not show less

aggression, however, than the children in either of the control groups.

Three film sequences were utilized by Bandura (1965) in a further study of the influence of consequences to the model on children's aggressive behavior. The major portion of each sequence depicted an adult behaving in an aggressive manner toward an inflated rubber doll. In one sequence the adult was punished for his aggression. In another he was rewarded, and in the third there were no consequences. As in the earlier study, children who saw the model punished for aggression showed less aggressive behavior in a subsequent test situation than children who saw the model rewarded. They also showed less aggression than children in the no-consequence condition. The same amount of aggression was displayed by children in the model-rewarded and no-consequence conditions.

Putting the two sets of findings together, the following pattern emerges: the model-punished condition produced less aggression than either the model-rewarded or no-consequence condition but no less than the no-model (and also the active nonaggressive model condition); the no-consequence condition produced the same amount of aggression as the model-rewarded condition. Clearly, the consequences to an aggressive model have an influence on the subject's aggression. Whether this signifies an inhibitory effect for the model-punished condition or a disinhibitory effect for the model-rewarded condition, however, depends on whether the no-consequence or no-model condition is chosen for purposes of comparison. I think that neither is ideal but the no-model condition is the more appropriate control, for the following reasons.

First, the fact that the no-consequence and model-rewarded conditions produced the same amount of aggression suggests they were psychologically equivalent and equally rewarding. That is, both films were taken up largely by the model engaged in highly vigorous aggressive behavior against a Bobo doll. The only difference was that in the model-rewarded film another adult praised the model and gave him candy and soft drinks. The model engaging in freely aggressive action without punishment could well have been the salient aspect of both films. Furthermore, the fact that the aggressive model was an adult may have provided an added element of legitimization of aggression in the two conditions, thus

tending to equalize them further. If the no-consequence condition is equivalent to the model-rewarded condition, it is inappropriate to use it as the control.

Second, any ceiling-effect explanation, which might argue against using the no-model condition as the control, is doubtful since the aggression scores in the no-model condition were as high as the active-non-aggressive-model condition and high enough for an effective inhibitory agent to have a marked affect; yet the model-punished group tended to show slightly (though not significantly) more rather than less aggression.

My interpretation of the findings, then, is that the low level of aggression in the no-model condition was primarily the result of the child's past socialization experiences. Witnessing a model behave aggressively appears to have a disinhibiting effect, which is sustained if the model is rewarded or merely goes unpunished. (The weakening of inhibitions against aggression by exposure to models has also been demonstrated in several other studies including those of Bandura and Huston, 1961 and Bandura, Ross and Ross, 1963a). Punishment to the model has the effect of neutralizing the disinhibition and reducing the aggression to the baseline level—but not below.

The research suggests, then, that exposure to aggressive models who are punished may not increase the child's tendency to inhibit the expression of aggression, although it may neutralize the aggression-arousing effects of watching the model behave aggressively in the first place. The same line of reasoning may also explain the finding by Collins (1973) that children at three age who observed models punished for aggression showed less aggression than children who observed a rewarded model but were no less aggressive than children who observed no model. It may also explain the finding by Colling (1973) that children at three age levels (grades 3, 6 and 10) who observed television-like films in which a man commits a crime and is apprehended and punished, displayed the same amount of aggression afterwards as children who observed no model.

THE EFFECTS OF TELEVISION

Children of all ages spend many hours watching television and the trend in the amount of viewing time continues to be upward.

Though wide variations exist depending on the segment of the audience surveyed, the average television set is on almost seven hours a day and children are among the most frequent viewers (Roberts and Bachen, forthcoming). Further increases can be expected with the growing use of cable television and videotape recorders. The effects of television viewing on the social and emotional lives of children has been the subject of considerable research. Most of this work has concentrated on violence and there are competing hypotheses concerning television's effects on this behavior. Some argue that watching filmed violence may *reduce* one's proneness to violent behavior because of the cathartic release provided. Others note that viewers, especially children, may learn by observing and imitating others. Thus, if a child sees television characters (especially those presented in a positive light with whom the child might identify) handling social conflict situations in a violent manner, he may respond in similiar fashion when placed in a conflict situation. Repeated exposure may also blunt a sensitivity to violence, leading the child to underestimate or fail to anticipate the painful consequences of aggressive acts.

Laboratory experiments have shown fairly conclusively that children exposed to a live or filmed model behaving aggressively (or helping or sharing) are apt to behave like the model shortly afterward. These studies suggest that when children observe a violent television program they are likely to have an immediate tendency toward aggressive behavior. The important social issue is whether television violence has long term effects.

Researchers employing sample surveys have reported positive correlations between children's viewing of violent television programs and such measures of their aggression as amount of conflict with parents, frequency of fighting, and delinquent behavior. These correlations do not prove a causal connection, however, they may for example, reflect a tendency for aggressive children to prefer violent television (Atkin et al., 1979) or yet a third variable may predict both aggressive behavior and the preference for violent television. Efforts have been made to overcome these limitations. In several studies where the samples were large enough to control for a variety of third variables, the relationship between viewing violence and aggressive behavior remained, although considerably weakened. A more stringent, though not perfect (Rogosa, 1980), technique for establishing a causal connection from correlational

data is the "time-lagged" design. This method was employed by Eron et al., (1972), who found that children preferring violent television were rated as more aggressive in their behavior 10 years later.

Perhaps the most convincing way to test for long-term effects is to control the television viewing experience of children and observe their social behavior over an extended time in a natural setting. This is difficult, time-consuming, and expensive research. It demands the active cooperation of parents, schools, and other institutions. Control groups are required that are similar to the group watching the violent program, but that either watch a different program or participate in other activities (a rarely used control). Children in a control group may resent being deprived of their usual television fare and their possible anger at this change must be accounted for in analyzing the data. Children must be observed before, during, and shortly after watching the film, as well as some time later. The observer must know whether he is observing experimental or control subjects. Few experimental studies of this type have been attempted. All of them lack at least one of these requirements, and the results are inconclusive. Feschbach and Singer (1971), in two studies where boys 9-15 years of age watched either aggressive programs (e.g., "Gunsmoke") or nonaggressive programs (e.g. "The Dick Van Dyke Show"), found no evidence that the violent programs led to an increase in aggressive behavior. Leyens et al., (1977) employed a similar design in three studies of delinquent adolescent boys living in reformatories. No data on prolonged effects were reported, but aggressive behavior did increase during and immediately following the program for those who watched violent films. Other studies with younger children (Friedrich and Stein, 1973; Sawin, 1973) have found no, or highly qualified, evidence for an aggression-increasing effect of viewing televised violence.

In short, the data suggest some relationship between TV viewing and violent behavior, but studies employing the most stringent methods have not been performed. As one moves from the highly controlled but artificial laboratory experiments to observations in natural settings, the findings become less clear. The laboratory experiments clearly show that televised violence can have immediate violence enhancing effects. Correlational research suggests long-term effects but lacks the methodological rigor to support a

causal inference. The field intervention studies show that children's aggressive tendencies in natural settings may be elevated while watching television violence and for a short time afterwards. But without further research, the nature of long-term effects is not certain. It may well be that intervening experiences will always make the proper determination of such effects difficult.

Researchers have recently initiated studies that focus on how television may influence children, irrespective of program content. One promising line of research by Collins (1979), has revealed children's inability to separate the central plot from peripheral details. His data suggest they often cannot make the proper inferences about motives underlying acts of aggression or the consequence of an act for the victim or the actor. What they retain is the aggressive act itself. This fragmentary experiencing of the film by young children is amplified by commercials, which frequently interrupt the sequence from act to consequence. As a result, the neutralizing effect of the aggressor being punished, mentioned earlier, may not occur in young children.

Other studies have begun to examine how a child's identification with television characters, such as "Mr. Rogers," may form a basis for influence. Can such programming encourage children's prosocial behavior, such as cooperation, sharing, and giving comfort? In one study (Friedrich and Stein, 1973), researchers showed four 20-minute prosocial films ("Mister Rogers' Neighborhood"), over a one-week period to kindergarten children, sometimes in combination with special training. The training consisted of (a) verbal learning in which themes from the programs were labelled in storybooks and rehearsed by the children; (b) role-playing in which themes were rehearsed by the experimenter and the children using hand puppets; or (c) both verbal learning and role-playing. Exposure to the prosocial films without special training produced an increase in general content knowledge, but no increase in the child's overt helping behavior. With the addition of any of the training techniques, exposure to the prosocial film led to an increase in helping behavior.

The results of this and other similar studies (e.g., Coates, et al, 1976) seem to suggest that the prosocial behavior of young children may be increased through television only when the programming is supplemented by other training procedures. Since most television viewing will continue to occur outside of the educational context,

further research is required on the type of programs that may increase children's prosocial behavior without requiring supplementary techniques.

Television has clearly become a significant force in children's early socialization. Research evidence suggests that both aggressive and prosocial behaviors may be encouraged by television; however the evidence regarding the strength of these effects and their relation to program format and viewing context is limited and inconclusive.

IMITATION AND SELF-CONTROL

Bandura and others have argued that with appropriate modeling procedures children can be taught to exert control over their impulses and deviant behavioral tendencies even in the absence of external sanctions. Two general methods have been used: exposing the child to a model who is tempted to behave in a deviant manner but resists the temptation; and exposing the child to a model who behaves in a deviant manner and is punished for it.

EXPOSURE TO SELF-CONTROLLING METHODS

In the first published study of this type Stein (1967) assigned fourth grade boys to do a boring job (watch for a light and push a button when it goes on) while an attractive movie was being shown just outside their line of vision. The prohibition against looking at the movie was stated as follows: "The lights probably won't come on very often so you may do whatever you like as long as you stay in your chair. You must stay in your chair, though, so you'll be ready when the lights do come on." Then followed one of three conditions: exposure to an adult model doing the same task who said aloud, "I sure wish I could see the movie" and then yielded to the temptation to do so; an adult model who said the same thing but resisted temptation; and no model. After that the child was left alone and observed through a one-way mirror. The findings were that observing a model who yielded to temptation resulted in more yielding than the other two conditions. The subjects who observed a model who resisted temptation, however, showed no more resistance than the control group. This suggests that observing deviant models may serve to legitimize deviancy and undermine the sub-

ject's prior socialization against it. Observing models who resist the temptation to deviate, however, is likely to be ineffective as an agent of inhibition. Other interpretations are possible. One, that the high level of resistance shown by the no-model control group produced a "ceiling effect," is not supported by the data, as noted by Stein, since the resistance scores of the controls were actually slightly higher than those who observed the resisting model. It remains possible, however, that the control group's deviation scores were spuriously low because the deviant response had little salience for them. In any case, the study provides no evidence that observing a resisting model contributes to resistance to temptation.

Recent research raises the possibility that Stein's results may reflect the predominantly middle-class background of her subjects. Rosenkoetter (1973) used a similar design with lower-class, mostly white, third-grade students in a Lutheran parochial school, half of whom were from broken homes. He found, as did Stein, that the effects of observing a model who yielded to temptation far exceeded the effects of observing a model who resisted temptation; the resisting model in this case, however, did have a statistically borderline effect. Fry (1975) studied 8- and 9-year-old Indian children and American middle-class children living in India, using the forbidden-toy paradigm. For the Americans, the yielding model was effective but the resisting model was not, which fits Stein's findings. With Indian children, however, the resisting and yielding models were both effective, though marginally. Fry suggests that adult models who resist temptation may be effective, though marginally. Fry suggests that adult models who resist temptation may be effective in cultures which stress the importance of obedience. This explanation may also apply to Rosenkoetter's findings, since lower class parents typically place great stress on obedience (e.g., Kohn, 1959), although it is not known whether this was true in Rosenkoetter's sample.

Another series of experiments, begining with Bandura and Kupers (1964), deal with the child's adoption of a model's performance standards. The typical procedure is one in which the subject participates in a bowling game with a model. The range of scores obtained is controlled by the experimenter. At the outset, the subject and model are given access to a plentiful supply of candy or chips (exchangeable for toys later) from which they can help themselves in accord with instructions. In one experimental condition,

the model sets a high standard of self-reward (e.g., on trials in which he obtained or exceeds a score of 20, he rewards himself with one or two candies and says something like "I deserve an M & M for that high score"). On trials in which the model fails to meet the standard, he takes no reward and makes some comment like "No M & M's for that" or "That does not deserve an M & M treat." After exposure to their respective models, the subjects play the bowling game a number of times, and the performance level for which they reward themselves is recorded.

Most of these experiments have limited relevance to internal self-control because an adult (usually not the model) is present at all times. In the two studies in which children are left to play the game alone, however, the findings were essentially the same as in the others: the children's pattern of self-reward and self-denial resembled that of the model to which they were exposed (Grusec, 1971; Liebrt & Ora, 1968). That is, the children who observed a model apply a low standard rewarded themselves generously even for minimal performance. Children who observed a model apply a high, self-denying standard helped themselves to rewards sparingly and only when they achieved relatively high levels of performance.

It is difficult to interpret these findings because only two studies included control groups not exposed to any model. And whereas in both of these studies the observation of models with low standards resulted in the use of low standards by the children, such consistency was not obtained with high standards. In one study the subjects who observed models with high, self-denying standards demonstrated more self-denial than did the control group (Liebert & Ora, 1968); in the other study, they did not (Bandura & Whelan, 1966). It is difficult to know which finding to weigh more heavily. Of the two, only Liebert and Ora employed an "alone" condition on which to base the children's self-denial scores. On the other hand, the Bandura and Whelan study included six different independent tests, each with its own control group, and in all six the subjects who observed models with high, self-denying standards actually rewarded themselves *more* often than did the control groups (significantly so in two cases)—a pattern much like that found in the study by Stein discussed previously. It is possible that the self-denying behavior of the control groups, which may partly account for these findings, is due to the presence of an adult; but this adult was also present for the subjects who observed self-

denying models. Furthermore, in a study by Bandura and Perloff (1967), children who were instructed to set their own performance standard and reward themselves only when they attained it, tended to set high standards to which they then adhered even when left alone. The Bandura and Whelan findings thus cannot be ignored.

Even if we conclude from these experiments that self-denial may be fostered in children by having them observe self-denying models, there is evidence that the resulting self-denial is short-lived. Bandura, Grusec, and Menlove (1967b) reported that high, self-denying standards were readily abandoned in favor of more lenient standards used by a peer model. This finding takes on added significance in light of the evidence that children will ordinarily emulate an adult rather than a peer who uses the same standard (Bandura & Kupers, 1964). All in all, the evidence is not compelling that observing models who set high standards and deny themselves rewards when they fail to attain them results in self-denying behavior by the child. Models exhibiting lenient standards, however, do appear to be quite effective.

Still another aspect of inhibition and self-control that has been studied experimentally in relation to imitative modeling is the ability of the child to defer immediate gratification in favor of more valued long-range satisfactions. In a study by Bandura and Mischel (1965) fourth- and fifth-grade children were administered a series of 14 paired choices. Each pair consisted of a less valued item that could be obtained immediately or a more valued one that would not be available until 1 to 4 weeks later. The subjects were asked to choose one item from each pair and advised to choose carefully because they would actually receive 1 of the 14 items they selected—either on the same day or after the delay period indicated for their preference. Several weeks later the subjects were exposed to an adult model who made choices in a similar situation though with items more appropriate for adults. With high-delay children, the models consistently selected the immediately available items and in several instances commented briefly according to a prearranged script on the benefits of immediate self-reward (e.g., "Chess figures are chess figures. I can get much use out of the plastic ones right away."). In addition, after the fourth choice, the model casually summarized his immediate-gratification philosophy of life as follows: "You probably have noticed that I am a person who likes things now. One can spend so much time in life waiting that one

never gets around to really living. I find that it is better to make the most of each moment or life will pass you by." With low-delay children the model consistently selected the more valued, delayed items. The model likewise commented periodically on the virtues of self-imposed delay (e.g., "The wooden chess figures are of much better quality, more attractive, and will last longer. I'll wait two weeks for the better ones.") and expounded his postponement-of-gratification philosophy of life in the following manner: "You have probably noticed that I am a person who is willing to forego having fewer or less valuable things now, for the sake of more and bigger benefits later. I usually find that life is more gratifying when I take that carefully into account." Immediately after observing the model the children were individually administered another set of 14 choices which differed somewhat from the original set. To test for stability of the altered delay pattern, the children were also readministered the original set of 14 choices between 4 and 5 weeks later.

Substantial modifications were obtained in both the immediate postexposure test and the later test. The effects of the model were most pronounced for the children who initially showed a preference for delayed rewards. These children showed a marked shift toward a preference for immediate and less valued rewards after observing a model who favored immediate gratification. For the subjects who initially exhibited a disposition toward immediate rewards—a more important group for our purposes since they shifted toward increased self-control—the findings are less clear-cut. On the one hand, these subjects did show an increased willingness to wait for more highly valued rewards after observing a model who exhibited such a preference, both immediately after exposure to the model and in the later test, whereas a control group of comparable subjects who did not observe a model shifted significantly only in the postexposure test. On the other hand, when a direct comparison was made, the experimental and control groups did not differ significantly in either the immediate or the later test, a finding which resembles those obtained in the modeling studies already discussed.

An interesting aspect of this study which may complicate any interpretation of the findings is the fact that the model gave a convincing philosophy and rationale for his act, which means that the subjects may have shifted their preference because they were

persuaded by these arguments. Indeed, a third experimental group which did not see the model but heard his recorded comments shifted just as much as the group that did see the model. The finding is no less interesting if the model's arguments are the important factor, especially in view of the long-range effects demonstrated, but the usual imitation or even observation learning concepts may not apply, since the subjects may actually be experiencing a change of mind. Still another possibility is that the subjects perceived the model's behavior as defining the socially acceptable norm in such choice-making situations, and then merely shifted their preference accordingly. This "demand characteristic" explanation is plausible particularly since the experimenter was present while the subjects made their choices (although the model had left). With these conceptual and methodological qualifications, we would tentatively conclude that observing models can increase the child's willingness to forgo immediate gratification when this is clearly in the interest of still greater gratification in the future.

EXPOSURE TO PUNISHED DEVIANT MODELS

A number of experiments have been done on the effects of having children observe models—mostly peers—who are punished for behaving in a manner forbidden by the experimenter. The procedure used by Walters and Parke (1964) is typical. The subjects, 6-year-old boys, were first shown some toys and forbidden by the experimenter from touching them with the statement, "Now, these toys have been arranged for someone else, so you'd better not touch them." They then observed a 3-minute color film sequence depicting an adult female, presumably a mother, indicate to a small boy that he should not play with toys that had been placed on a nearby table. The "mother" then sat the child down beside the table, handed him an open book, and left the room. After her departure, the child put the book aside and played for approximately 2 minutes with the prohibited toys. For the model-rewarded condition, the last part of the film showed the "mother" return to the child, sit by him, hand him toys, and play with him in an affectionate manner. In contrast, under the model-punishment condition the film ending showed the "mother," on her return from the other room, snatch from the child the toy he was then playing with, shake him, and sit him down once more in the chair with the

book. For the no-consequence condition the film ceased after the model had played with the toys for 2 minutes, that is, the "mother" did not reenter the room. After the film, the experimenter made an excuse to leave the room, promised to return soon and play a game with the child, and gave him the dull task of "reading a dictionary" while she was gone. The experimenter remained outside the room for a 15-minute period during which an observer recorded the latency of the first deviant response made by each child, the number of times the toy was touched or played with, and the duration of deviation. Children in a control gorup saw no film but were otherwise treated in the same way as children under the three film conditions.

The findings were as follows: (1) the subjects who observed the model punished deviated less quickly, less often, and for a shorter period of time than subjects under the model-rewarded and no-consequence conditions; (2) they actually deviated slightly (though not significantly) *more* than the control group who saw no film; and (3) the no-consequence condition resulted in as much deviation as the model-rewarded condition. These results are typical, although there is an exception (Walters, Leat, & Mezei, 1963). How one interprets them depends on whether the no-model or the no-consequences condition is used as the control group. The issues are the same as those discussed earlier in connection with imitation and aggression. Here, too, and for similar reasons, I believe the no-model group is the appropriate, though by no means the ideal control group. With this in mind, I would suggest the following interpretation of what happens in the model-punished condition. First, the subjects were initially motivated to play with the attractive toys, but deterred by the experimenter's prohibition perhaps because of the general tendency to obey adult authority in strange unstructured situations. Second, watching a peer model play had an initially disinhibiting effect. Third, this disinhibition was sustained in the absence of punishment, that is, in the model-rewarded and no-consequence conditions. (The analysis thus far may also encompass the Stein findings mentioned earlier since the yielding-model condition there was essentially the same as the no-consequence condition here.) Fourth, the punishment to the model was potent enough to counteract the disinhibition and re-establish the baseline level of inhibition created by the prohibition, but not enough to increase the inhibition beyond that level. Exposure to a

deviant model who is punished thus appears to have an inhibiting effect on the response tendency initially aroused by the model's deviant act, but not on that existing before exposure. Stated differently, the effectiveness of a prohibition may be reduced by exposing the child to a model performing the prohibited act; the reduction is temporary if the model is subsequently punished.

In a recent study, Zimmerman and Kinsler (1977) used essentially the Walters and Parke procedure with certain modifications. The modeling film was different and there were three variants of the initial verbal prohibition from the experimenter to the subject: Strong prohibition (In this room there are some toys. They belong to another child. You are not to touch or play with them.); mild prohibition (. . . I would prefer, etc. . . .); no prohibition. This was the first study of this type to include a no-prohibition condition, thus affording a relatively pure test of the effectiveness of observing a punished model. And, indeed, it was found in the no-prohibition condition that the children who had observed the punished model spent less time playing with the toys than subjects in the no-model condition. Unfortunately, there is a detail in the modeling film that may nullify the potential importance of these results. In the film the adult tells the child model that the adult has to leave the room to get some things she forgot. She also says that she will close the door when she leaves and that she will knock before re-entering. On hearing the knock, the child model tries hurriedly to replace the toys he has been playing with but there is not enough time. The adult chastizes and spanks him for playing with the forbidden toys, and he cries. The problem is that the child's task, the physical layout of the room, and, most importantly, the adult's promise to knock, are virtually identical to the situation in which the subject is placed. It therefore seems likely that the message communicated to the subject by the film is that he had better not play with the toys because despite the experimenter's promise to knock, he will get caught and will be painfully punished. What his refraining from playing with the toys may indicate, then, is not internal self-control but a response to the demand characteristics of the experiment, including possibly a fear of external punishment.

Overall, the most reasonable conclusion to draw from the research on modeling and self-control is that exposure to deviant, unpunished models has a disinhibiting effect that may reflect a temporary undermining of the observer's prior socialization in re-

sistance to temptation and self-denial. The research is less clear, however, as to the effectiveness of exposure to models who resist temptation, or who deviate and are punished. The research also suggests that the failure to imitate a model's self-denying behaviors is not due to deficiencies in cognitive capacity, since the children were able to imitate the models, sometimes in remarkable detail, when self-denial was not involved. Perhaps the observation of models is not enough to arouse sufficiently powerful motives to overcome the child's natural tendency towards self-gratification. This may be due to the artificiality of the typical laboratory experiment and the use of models who are strangers to the child.

Another interpretation, already alluded to, is that rewarding and punishing a model serves mainly to communicate a message from the experimenter to the subject, telling him what he is expected to do in the strange experimental situation. The model serves merely as the medium of this message. In other words, the subject may not experience vicarious reward and punishment, as is often assumed, but he may simply infer what is expected of him, and perhaps what will happen to him if he indulges his desires and behaves otherwise. To demonstrate more than this, that is, to demonstrate that the subjects' responses are not simply due to demand characteristics, may require evidence that the effects are durable and manifested in other, quite different situations. But then we are faced with the same dilemma posed earlier in connection with aggression and prosocial behavior, namely, any effects of these brief manipulations are apt to be overridden by the subject's everyday experiences.

As a final critical point, some of the experimental procedures appear to lack any ecological validity. For example, children may imitate a model's standards of self reinforcement under the experimental conditions described, but how often do real-life models reward themselves so ostentatiously and with such explicit verbal justification?

THE CLINICAL USE OF MODELING

In his book *Principles of Behavior Modification* Bandura (1969b) theorized that if a person has a deep-seated fear (e.g., a fear of initiating social interaction or a fear of dogs) it may be possible to reduce or eliminate the fear by repeatedly exposing the person to a

model who approaches the feared object without the occurrence of aversive consequences. According to Bandura, the most effective procedure is to expose the person to a graduated sequence of the aversive stimuli that progressively approximate the most feared event. (If the most feared event is presented too soon, the person might turn away and necessary observation learning from the model might not take place.) It is also advisable, according to Bandura, to expose the person to diverse models who demonstrate fearless behavior to different forms of the feared object without adverse consequences. Much of the pertinent research has been done with adults but several interesting studies have been reported in which children served as subjects.

In a study by Bandura, Grusec, and Menlove (1967b), preschool children who displayed fearful and avoidant behavior toward dogs were assigned to one of four treatment conditions: (a) one group participated in a series of brief modeling sessions (eight 10-minute sessions on four consecutive days) in which they observed, in a party context (including cookies, prizes, balloons, brightly colored hats, etc.), a fearless 4-year old child exhibit progressively stronger approach responses toward a dog. The fear-arousing properties of the model's performance were gradually increased from session to session by decreasing the physical restraints on the dog, increasing the directness and frequency of the model's approach responses, and increasing the duration of interactions; (b) a second group observed the same graduated modeling stimuli, but in a neutral context; (c) a third group merely observed the dog in the party context, with the model absent; (d) a fourth group participated in the party activities without any exposure to either the dog or the modeled displays. Following each treatment, the subject was given an avoidance test in which he was successively asked to approach and pet the same dog, release him from the playpen, remove his leash, feed him biscuits, spend a fixed amount of time with him, climb into the pen with him and, finally, lock the gate and remain in the pen with the dog. The test was also carried out with a second dog, and repeated one month later. The results were that the two groups of children who had observed the model interact nonanxiously with the dog displayed a stable and generalized reduction in avoidance behavior, and differed significantly in this respect from the children in the other two conditions. The party context did not enhance the effects produced through modeling. Particularly inter-

esting is this finding: In the one-month follow-up, not one control subject was able to remain alone in the playpen with each of the dogs, (the most stringent test in the study), whereas 33% of the children in the modeling conditions were able to do so.

In a subsequent study by Bandura and Menlove (1968), one group of preschool children who were fearful of dogs observed a series of films (eight 3-minute films, two per day on four alternate days) in which a 5-year old boy displayed the same progressively more intimate interactions with a dog that the model in the previous study did. A second group was exposed to a similar set of graded films depicting a variety of models interacting non-anxiously with numerous dogs varying in size and fearsomeness. A control group was shown movies containing no animals. The assessment procedures were the same as those used in the previous study. The results were that both the single-modeling and multiple-modeling treatments produced significant reductions in children's avoidance behavior, but only the multiple modeling treatment weakened the children's fears sufficiently to enable them to remain alone in the playpen with the dog. The authors also note that the single filmed model in this study was not as effective as the single live model in the previous study, but the multiple filmed model was as effective. And, the multiple-model group actually showed less fear of the dogs a month later than they did on the day following completion of the experimental treatments.

Symbolic modeling has also been used as a means of influencing the social behavior of preschool children with low levels of social responsiveness. In these studies children are selected as having low levels of interaction on the basis of teacher ratings plus behavioral observations. The children are then shown films or videotapes depicting children interacting with each other, accompanied by a narrative sound track consisting of an adult voice describing ongoing social interactions and their outcomes. O'Connor observed that immediately following exposure to such a film children showed significantly higher levels of social interaction than children in a no-treatment condition (1969), and he found a similar effect which was maintained at assessments occurring 3 weeks and 6 weeks following exposure to the modeling condition. Keller and Carlson (1974) found an increase in social interactions (including both the giving and receiving of social reinforcements) immediately following the modeling treatment, but the effect was not maintained

relative to a no-modeling condition at a 3-week follow-up assessment.

In the most recent and perhaps most interesting study of this type Jakibchuk and Smeriglio (1976), socially isolated children were randomly assigned to one of four conditions: One group (self-speech group) watched four different 5-minute videotaped sequences (one per day on four consecutive days) each of which portrayed a child model displaying a progressive change from solitary play to active participation with peers. The accompanying sound track featured self-guiding comments in first-person form relating to the model's activities (e.g., "My name is Danny and I go to nursery school. I'm sitting here all by myself looking at a book. . . . Those children over there are playing together. . . . I would like to play with them. But I'm afraid. I don't know what to do or say. . . . This is hard, but I'll try. . . . I'm close to them. . . . I did it. Good for me. . . . I like playing with Johnny and Bobby. I'm really glad I decided to play with them. I'm having lots of fun"). A second group (narrative group) watched the same videotapes accompanied by sound tracks containing the same information but voiced by a child in third-person form. A nature-film control and a no-treatment control group were also employed. Pretreatment, posttreatment, and follow-up observations were made with three different measures of social behavior: positive social behavior directed toward peers, positive social behavior received from peers, and social interaction. The findings were that on all three measures the children in the self-speech condition improved from pretreatment to posttreatment (the day after the last videotape presentation), and from pretreatment to follow-up (three weeks after the posttreatment assessment). The narrative group did almost as well, showing improvement on two of the three measures. Perhaps most suggestive is the finding that at follow-up the self-speech group was the only experimental group that did not differ significantly from children who had never been socially isolated. The narrative group, though improved relative to their pretreatment behavior, remained significantly less socially active than the nonisolates. As noted by the authors, the long term effects of the modeling procedures in these social isolate studies are very likely due to the fact that the subjects continually receive reinforcement from their peers for acting in the same way that the model did.

The results of these studies are impressive and the question may be asked, why are modeling procedures so successful in reducing long-standing phobias, yet apparently relatively ineffective in enhancing prosocial and self-controlling behaviors. For one thing, the procedures are different. In the clinical studies the subjects are preselected; they all have a particular fear. The model is a peer who initially keeps distance from the feared object, and is thus someone with whom the subject can identify. It is therefore possible in these studies that the subject to some extent shares the feelings that the model ostensibly has in the situation, and that the effectiveness of these procedures may therefore depend in part on the vicarious arousal of affect. This, in conjunction with the realization that the anticipated aversive consequences do not occur, may contribute to diminishing the subject's fear. In the prosocial and self-control studies there is little if any reason to expect vicarious affect arousal, only the awareness of what actions are to be expected, permitted, or punished. In addition, the modeled actions in the clinical studies are not likely to be counteracted by the subject's everyday experiences as the modeled actions in the prosocial and self-control studies. Those who fear dogs, for example, may simply keep away from them in real life; and if they should imitate the model's actions the chances are that they will not be harmed. And, in the social isolate studies, as already noted, imitating the model may actually lead to responses from peers which are rewarding and thus help sustain the effects of the modeling procedure.

CONCLUSIONS

I will now attempt to pull together what we can say with confidence about identification and imitation in children, as well as to indicate some of the important questions about which we still know very little.

1. As regards identification, the various theories, which pertain mainly to underlying motives, are highly developed and sophisticated, but there is very little pertinent research. The only thing we can say with confidence is that there is no support for the psychoanalytic assumption that identification is an all-encompassing unitary process. There is evidence to suggest, but only to suggest, that culturally approved sex-linked preferences and behaviors and certain aspects of morality that are reflected overtly in the parent's

words and deeds may be acquired in part through identification.

2. Not surprisingly, there is good evidence that the child's general cognitive level has an impact on what he can learn by observing models. For example, young children can abstract the simple grammatical rules and conceptual strategies that underlie a model's actions and utilize these rules later when the task and setting are slightly different. They cannot, however, grasp rules that are beyond their cognitive level, nor does it appear that they can transfer even simple rules to tasks and settings that differ sharply from those in the modeling situation.

3. Since cognition influences and limits imitation, the possibility exists that a convincing developmental analysis of imitation, paralleling the stages in cognitive development, may someday be made. To date, the closest approach to a stage analysis comes from Piaget's work with infants, which suggests that by as early as one month of age the infant will imitate, though only if another person first mimics a certain action of his. By 4 or 5 months he can imitate acts that are unrelated to his own momentary state, but this is limited to acts that are already part of his repertoire and that provide him with a visual impression matching the model's acts; furthermore, external reinforcement is required to connect the act to the model's behavior. By about one year, these limitations are overcome and the child spontaneously imitates novel acts, though with considerable trial and error. By about 16 months, the infant appears to be capable of spontaneous imitation of novel acts, with little trial and error. More importantly, he can also imitate a model after a long delay, in the model's absence, which indicates that internally represented images have begun to replace overt imitation and to serve as a guide for later enactment of the model's behavior.

4. The fact that children do abstract rules, however simple, from discrete modeled acts indicates that they are clearly not passive observers but active cognitive processors of the model's words and actions. There is also suggestive evidence that children may actually be provoked to re-think their own views, and sometimes to change their minds, as the result of being repeatedly exposed to an adult model who expresses a contrary view.

5. The research clearly shows that young children may acquire, from even a very brief period of observation, certain motoric and verbal behaviors that appear to be *associated with aggression* in real-life situations. That is, the children show these behaviors right

after observing the model. Furthermore, if the model is rewarded for his aggressive actions, the child is more likely to imitate these actions. If the model is punished for aggression, however, the child's resulting behavior is not measureably different from that of a child who observed no model. I underscored "associated with aggression" because none of this research dealt with actual interpersonal aggression by the subjects.

As we move closer to testing the impact of media violence on interpersonal aggression, the results become less clear. There is evidence, primarily from only one study however, that exposure to violent segments of an actual television program does produce an immediate increase in interpersonal aggression in children.

6. As regards the more significant question of the long-term effects of television violence, the results are more equivocal. The best way to examine such effects is to control the television viewing experience of a sample of children for an extended period of time. The studies that come closest to this ideal provide no evidence that television violence contributes to overt interpersonal aggression in children. And, though a recent line of research suggests that watching violent television programs may diminish one's emotional response to real-life aggression, further work is needed to substantiate the finding as well as to confirm the investigators' view that it reflects a blunting of the subject's sensitivity to violence that may increase his participation in it.

7. The research clearly indicates that exposing a child to a model who shares, or helps another person will increase the likelihood that the child will share or help if given the opportunity shortly thereafter. There is also evidence that in some cases the effect may last as long as several months. These long-term effects, however, seem to be confined to the performance of prosocial acts that are similar to those displayed by the model, and in similar settings which suggests that they may reflect nothing more than the demand characteristics of the experiments.

8. When we examine the studies dealing with the effects of watching actual segments of prosocial television programs, we find no support for the contention that prosocial behavior may be enhanced by watching television programs with prosocial content. This conclusion, which may be as difficult for some to believe as that pertaining to violent programs, may reflect the fact that any effects that brief exposures to prosocial programs might have are

likely to be overridden by the subjects' everyday television viewing experiences, as well as by their parents' childrearing practices and other socialization influences.

9. The research also indicates rather clearly that exposure to models who yield to the temptation to perform a prohibited act, without being punished, has a disinhibiting effect on children, which may reflect a temporary undermining of their prior socialization in self-control. The research is less clear, however, as to the effects of being exposed to models who resist temptation or who yield to it and are punished. It is entirely possible that this rather vast body of research, all of which has been confined to the laboratory, demonstrates nothing more than the demand characteristics of the experiments or, in some cases, experimental effects which have little to do with real life.

10. The use of modeling procedures has been found to be an effective means of overcoming children's fear of dogs as well as the fear of making social contacts with peers. These studies demonstrate the potential power of modeling procedures, although to achieve this power may require preselecting the subjects, carefully designing the modeling procedures so as to activate vicarious affective processes in them, and assuring that their everyday experience outside the laboratory will reinforce, or at least not counteract, the effects of modeling.

REFERENCES

Armor, D.J. *Measuring the effects of television on aggressive behavior.* Santa Monica: The Rand Corporation, 1976.

Atkin, C., Greenburg, B., Korzenny, F., McDermott, S. *Selective exposure to televised violence.* Journal of Broadcasting, 1979, 23, 5-13.

Bandura, A. Social-learning theory of identificatory processes. In D.A. Goslin and D.C. Glass (Eds.), *Handbook of socialization theory and research.* Chicago: Rand McNally, 1969a.

Bandura, A., Grusec, J.E., & Menlove, F.L. Vicarious extinction of avoidance behavior. *Journal of Personality and Social Psychology,* 1967a, 5, 16-23.

Bandura, A. *Principles of Behavior Modification.* New York: Holt, Rinehart, Winston, 1969a.

Bandura, A., Grusec, J.E., & Menlove, F.L. Some determinants of self-monitoring reinforcement systems. *Journal of Personality and Social Psychology,* 1967b, 5, 449-455.

Bandura, A., and Kupers, C.J. Transmission of patterns of self-reinforcement through modeling. *Journal of Abnormal and Social Psychology*, 1964, 69, 1-9.

Bandura, A., and McDonald, F.J. Influence of social reinforcement and the behavior of models in shaping children's moral judgments. *Journal of Abnormal and Social Psychology*, 1963, 67, 274-281.

Bandura, A., and Menlove, F.L. Factors determining vicarious extinction of avoidance behavior through symbolic modeling. *Journal of Personality and Social Psychology*, 1968, 8, 99-108.

Bandura, A., and Mischel, W. Modification of self-imposed delay of reward through exposure to live and symbolic models. *Journal of Personality and Social Psychology*, 1965, 2, 698-705.

Bandura, A., and Perloff, B. Relative efficacy of self-monitored and externally-imposed reinforcement systems. *Journal of Personality and Social Psychology*, 1967, 7, 111-116.

Bandura, A., Ross, D., and Ross, S. Transmission of aggression through imitation of aggressive models. *Journal of Abnormal and Social Psychology*, 1961, 63, 575-582.

Bandura, A., Ross, D., and Ross, S.A. Imitation of film-mediated aggressive models. *Journal of Abnormal and Social Psychology*, 1963, 66, 3-11 (a).

Bandura, A., Ross, D., and Ross, S.A. Vicarious reinforcement and imitative learning. *Journal of Abnormal and Social Psychology*, 1963, 67, 601-607 (b).

Bandura, A., and Whalen, C. The influence of antecedent reinforcement and divergent modeling cues on patterns of self-reward. *Journal of Personality and Social Psychology*, 1966, 3, 373-382.

Brenfenbrenner, U. Freudian theories of identification and their derivatives. *Child Development*, 1960, 31, 15-40.

Bryan, J.H., and Walbek, N. The impact of words and deeds concerning altruism upon children. *Child Development*, 1970, 41, 747-757.

Cline, V.B., Croft, R.G., and Courrier, S. Desensitization of children to television violence. *Journal of Personality and Social Psychology*, 1973, 27, 360-365.

Coates, B., Pusser, H.E., and Goodman, I. The influence of "Sesame Street" and "Mister Rogers' Neighborhood" on children's social behavior in the preschool. *Child Development*, 1976, 47, 138-144.

Collins, W.A. Effect of temporal separation between motivation, aggression, and consequences: A developmental study. *Developmental Psychology*, ;1973, 8, 215-221.

Collins, W.A. 1979. Children's comprehension of television content. In E. Wartella (Ed.), *Children Communicating: Media and Development of Thought, Speech, Understanding*. Beverly Hills: Sage.

Cowan, P.A., Langer, J. Heavenrich, J. and Nathanson, M. Social learn-

ing and Piaget's cognitive theory of moral development. *Journal of Personality and Social Psychology*, 1969, 11, 261-274.

Crowley, P.M. Effect of training upon objectivity of moral judgment in grade school children. *Journal of Personality and Social Psychology*, 1968, 8, 228-232.

Debus, R.L. Effects of brief observation and model behavior on conceptual tempo of impulsive children. *Developmental Psychology*, 1970, 2, 22-32.

Denny, D.R. The effects of exemplary and cognitive models and self rehearsal on children's interrogative strategies. *Journal of Experimental Child Psychology*, 1975, 19, 476-488.

Dorr, D. and Fay, S. Relative power of symbolic adult and peer models in the modification of children's moral choice behavior. *Journal of Personality and Social Psychology*, 1974, 29, 335-341.

Drabman, R.S. and Thomas, M.H. Does media violence increase children's tolerance of real-life aggression? *Developmental Psychology*, 1974, 10, 418-421.

Elliott, R., and Vasta, R. The modeling of sharing: Effects associated with vicatious reinforcement, symbolization age, and generalization. *Journal of Experimental Child Psychology*, 1970, 8-15.

Eron, L.O., Huesmann, L.R., Lefkowitz, M.M. & Walder, L.O. Does Television violence cause aggression? *American Psychologist*, 1972, 27, 253-263.

Feshbach, S.,and Singer, R.D. *Television and aggression*. San Francisco, Jossey Bass, 1971.

Friedrich, L.K. and Stein, A.H. Aggressive and prosocial television programs and the natural behavior of preschool children. *Monographs of the Society for Research in Child Development*, 1973, 38 (4, Serial No. 151).

Friedrich, L.K. and Stein, A.H. Prosocial television and young children: The effects of verbal labeling and role playing on learning and behavior. *Child Development*, 1975, 46, 27-38.

Fry, P.S. The resistance of temptation: Inhibitory and disinhibitory effects of models in children from India and the United States, *Journal of Cross-Cultural Psychology*, 1975, 6, 189-202.

Glassco, J., Milgram, N.A., and Youniss, J. The stability of training effects on intentionality of moral judgment in children. *Journal of Personality and Social Psychology*, 1970, 14, 360-365.

Grusec, J.E. Power and the internalization of self-denial. *Child Development*, 1971, 42, 93-105.

Hanratty, M.A., O'Neal, E., and Sulzer, J.L. Effects of frustration upon imitation of aggression. *Journal of Personality and Social Psychology*, 1972, 21, 30-34.

Harris, M. Reciprocity and generosity: Some determinants of sharing in children. *Child Development*, 1970, 41, 313-328.

Harris, M. Models, norms and sharing. *Psychological Reports*, 1971, 29, 147-153.

Harris, M.B. and Hassemer, W.G. Some factors affecting the complexity of children's sentences: the effects of modeling, age, sex, and bilingualism, *Journal of Experimental Child Psychology*, 1972, 13, 447-455.

Hartup, W.W., and Coates, B. Imitation of a peer as a function of reinforcement from the peer group and rewardingness of the model. *Child Development*, 1967, 38, 1003-1016.

Hetherington, E.M. A developmental study of the effects of sex of the dominant parent on sex-role preference, identification, and imitation in children. *Journal of Personality and Social Psychology*, 1965, 2, 188-194.

Hoffman, M.L. Identification and conscience development. *Child Development*, 1971, 42, 1071-1082.

Hoffman, M.L. Altruistic behavior and the parent-child relationship. Journal of Personality and Social Psychology, 1975, 3, 937-943.

Imamoglu, E.O. Children's awareness and usage of intention cues. *Child Development*, 1975, 46, 39-45.

Jakibchuk, Z. and Semeriglio, V.L. The influence of symbolic modeling on the social behavior of preschool children with low levels of social responsiveness. *Child Development*, 1976, 48, 838-841.

James, W. *The principles of psychology*. 2 Vols. New York: Henry Holt, 1890.

Kaplan, R.N. and Singer, R.D. Television violence and viewer aggression: A reexamination of the evidence. *Journal of Social Issues*, 1976, 32, 35-70.

Keller, M.F. and Carlson, P.M. The use of symbolic modeling to promote social skills in preschool children with low levels of social responsiveness. *Child Development*, 1974, 45, 912-919.

Kohn, M.L. Social class and parental values. *American Journal of Sociology*, 1959, 64, 337-351.

Krebs, D.L. Altruism—An examination of the concept and a review of the literature. *Psychological Bulletin*, 1970, 73, 258-302.

Kuhn, D. Imitation theory and research from a cognitive perspective. *Human Development*, 1973, 16, 157-180.

Lamal, P.A. Imitation learning of information processing. *Journal of Experimental Child Psychology*, 1971, 12, 223-227.

Laughlin, P.R., Moss, I.L. and Miller, S.M. Information-processing in children as a function of adult model, stimulus display, school grade, and sex. *Journal of Educational Psychology*, 1969, 60, 188-193.

Liebert, R.M. and Baron, R.A. Some immediate effect of televised violence on children's behavior. *Developmental Psychology*, 1972, 6, 469-475.

Liebert, R.M. and Ora, J.P., Jr. Children's adoption of self-reward patterns: Incentive level and method of transmission. *Child Development*, 1968, 39, 537-544.

Miller, N. and Dollard, J. *Social Learning and Imitation*. New Haven: Yale University Press, 1941.

Mischel, W. Sex difference , sex typing, and identification. In P. Mussen (Ed.) *Handbook of Child Psychology*, New York: Wiley, 1970, Pp. 3-72.

Murray, J.P. Television and violence: Implications of the surgeon general's research program. *American Psychologist*, 1973, 28, 472-478.

O'Connor, R.D. Modification of social withdrawal through symbolic modeling. *Journal of Applied Behavioral Analysis*, 1969, 2, 15-22.

O'Connor, R.D. Relative efficacy of modeling, shaping, and the combined procedures for the modification of social withdrawal. *Journal of Abnormal Psychology*, 1972, 79, 327-334.

Parke, R.D., Berkowitz, L., Leyens, J.P., West, S.G., and Sebastian, R.F. Some effects of violent and nonviolent movies on the behavior of juvenile delinquents. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology, Vol. 10*, 1977, 135-172.

Piager, J. *Play, dreams, and imitation in childhood*. New York: Norton, 1962.

Ragosa, D. A critique of cross-lagged correlation. *Psychological Bulletin*, 1980, 88, 425-458.

Rice, M.E., and Grusec, J.E. Saying and doing: Effects on observer performance. *Journal of Personality and Social Psychology*, 1975, 32, 584-593.

Ridberg, E.H., Parke, R.D., and Hetherington, E.M. Modification of impulsive and reflective cognitive style through observation of film mediated models. *Developmental Psychology*, 1971, 5, 185-190.

Rosenkoetter, L.I. Resistance to temptation: Inhibitory and disinhibitory effects of models. *Developmental Psychology*, 1973, 8, 80-84.

Rosenkrans, M.A. and Hartup, W.W. Imitative influences of consistent and inconsistent response consequences to a model on aggressive behavior in children. *Journal of Personality and Social Psychology*, 1967, 7, 429-434.

Rosenthal, T.L. and Carroll, W.R. Factors in vicarious modification of complex grammatical parameters. *Journal of Educational Psychology*, 1972, 63, 174-178.

Rule, B.G., Nesdale, A.R., and McAra, M.J. Children's reactions to information about the intentions underlying an aggressive act. *Child Development*, 1974, 45, 794-798.

Rushton, J.P. Generosity in children: Immediate and long term effects of modeling, preaching, and moral judgment. *Journal of Personality and Social Psychology*, 1975, 31, 459-466.

Rushton, J.P. Socialization and the altruistic behavior of children. *Psychological Bulletin*, 1976, 83, 898-913.

Sawin, D.B. Assessing empathy in children: A search for an elusive construct. Presented at meetings of the Society for Research in Child Development, San Francisco, March, 1979.

Staub, E. A child in distress: The influence of nurturance and modeling on children's attempts to help. *Developmental Psychology*, 1971, 5, 124-133.

Staub, E. Effects of persuasion and modeling on delay of gratification. *Developmental Psychology*, 1972, 6, 166-177.

Stein, A.H. Imitation of resistance to temptation. *Child Development*, 1967, 38, 157-169.

Sternlieb, J.L. and Youniss, J. Moral Judgments one year after intentional or consequence modeling. *Journal of Personality and Social Psychology*, 1975, 31, 895-897.

Tarde, G. *The laws of imitation* (2nd Ed.) New York: Henry Holt, 1903.

Thomas, M.H. and Drabman, R.D. Toleration of real life aggression as a function of exposure to televised violence and age of subject. *Merrill-Palmer Quarterly*, 1975, 21, 227-232.

Thomas, M.H., Horton, R.W., Lippincott, E.C., and Drabman, R.S. Desensitization to portrayals of real-life aggression as a function of exposure to television violence. *Journal of Personality and Social Psychology*, 1977, 35, 450-458.

Turiel, E. An experimental test of the sequentiality of developmental stages in the child's moral judgments. *Journal of Personality and Social Psychology*, 1966, 3, 611-618.

Walters, R.H., Leat, M., and Mezei, L. Inhibition and disinhibition of responses through empathetic learning. *Canadian Journal of Psychology*, 1963, 17, 235-240.

Walters, R.H., and Parke, R.D. Influence of response consequences to a social model on resistance to deviation. *Journal of Experimental Child Psychology*, 1964, 1, 269-280.

White, G.M. Immediate and deferred effects of model observation and guided and unguided rehearsal on donating and stealing. *Journal of Personality and Social Psychology*, 1972, 21, 139-148.

Yando, R., Seitz, V., and Zigler, E. *Imitation: A Developmental Perspective*, Erlbaum Publishers, In press.

Yarrow, M.R., Scott, P.M., and Waxler, C.Z. Learning concern for others, *Developmental Psychology*, 1973, 8, 240-260.

Zimmerman, B.J. and Dialessi, F. Modeling influences on children's

creative behavior. *Journal of Educational Psychology*, 1973, 65, 127-134.

Zimmerman, B.J. and Kinsler, K. Children's acquisition of self-restraint: The effects of vicarious punishment and verbal prohibition. Unpublished paper, Graduate Center, City University of New York, 1977.

Zimmerman, B.J. and Rosenthal, T.L. Observational learning of rule governed behavior by children. *Psychological Bulletin*, 1974, 81, 29-42. (b)

CHAPTER 8

Viewing of Commercials and Children's Understanding of the Rules of Nutrition

JUNE ESSERMAN

JUNE ESSERMAN

Viewing of Commercials and Children's Understanding of the Rules of Nutrition

SUMMARY

There was concern that exposure to many TV commercials for snack foods and treats from a very early age might interfere with children's development of sound ideas about nutrition and the proper role of sweets and snacks in the diet.

This research was undertaken to assess the nutritional views of young children who are regular TV watchers and to compare the views of children who are relatively heavier viewers with those who are somewhat less frequent viewers.

A total of 708 children between the ages of 5 and 8 from middle and lower socioeconomic backgrounds, from five states in the United States were tested.

The results showed very high awareness of the general rules of good nutrition and the appropriate use of sweets and snacks in the diet among children throughout this age group. Knowledge about the benefits and hazards of various foods such as candy, milk and fruits was extremely high even among the youngest children. Further, there were no differences found between heavier and lighter TV viewers in the ideas these children held about nutrition and the use of snacks and treats. The data suggests that the viewing of TV snack and candy commercials typcially shown in the U.S. do not interfere in any significant way with children's development of sound views about nutrition.

PURPOSE

In view of all the advertising of sweet products to children, (particularly candy, pre-sweet cereals and sweet drinks) there was concern as to whether children who watch TV regularly indeed had an incorrect view of their appropriate use or role in the diet. The available data indicates that regular watching of TV is almost universal among young children over the age of two in the United States and that they see an average of 1-2 hours a week of commercials. There was particular concern for the impact of TV advertising on very young children (5 through 8 years) who might be getting the impression that large amounts of sweets were quite acceptable in a child's diet and undervaluing or not developing an awareness of the importance of less advertised products like fruits, vegetables and milk. Such questions were raised but unanswered by the government-sponsored review of research on the effects of television advertising on children (Adler et al, 1977).

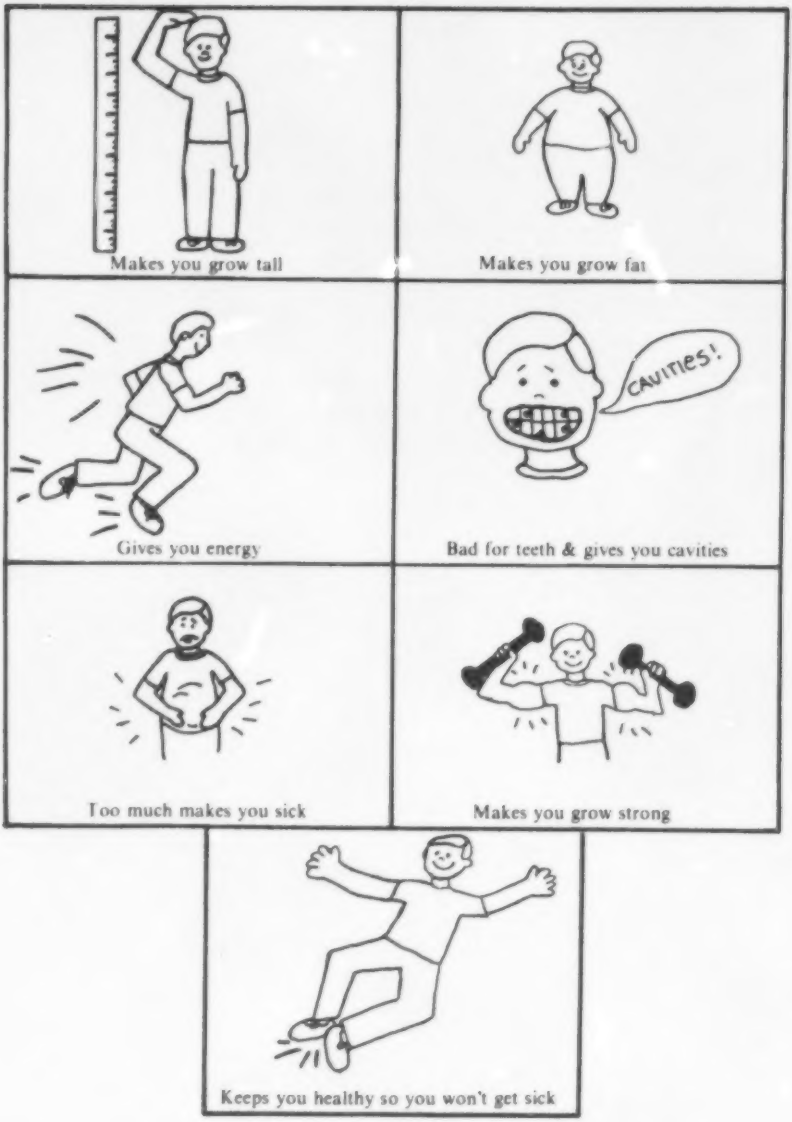
The purpose of the study reported here was, therefore, to assess young TV watchers' knowledge of nutrition with regard specifically to awareness of the benefits and hazards of sweets in their diet such as candy and soft drinks versus other foods and beverages.

This study was designed, therefore, to investigate:

1. What benefits or hazards do young children associate with candy, soda pop, milk, vegetables and fruits?
2. How often do they feel they should eat each of these food-/beverage categories?
3. How well do they use their nutritional information in working out meals and snacks? Do they indeed use the rules they know in deciding on meals?
4. How do children differ in their knowledge of nutrition between the ages of 5 and 8?
5. How does heavy TV viewing compared with light viewing affect awareness of the rules of good nutrition?

METHOD

A major objective in devising a method of studying children's knowledge of foods was to employ a method that required largely non-verbal skills since 5 year olds could not be relied on to understand and answer in a highly verbal way. (Flavell, J.H., 1977)


Makes you grow tall
Makes you grow fat
Gives you energy
CAVITIES!
Bad for teeth & gives you cavities
Too much makes you sick
Makes you grow strong
Keeps you healthy so you won't get sick

The method developed that proved to be highly effective was to use illustrations instead of purely verbal questions and pictures of the foods and beverages the child was asked about. Specifically, in one question in which each child was asked to select the foods and beverages for a series of meals that would be "good for you," the child was able to answer the questions by choosing from cutouts of pictures of foods and drinks. The child would place the chosen items on a placemat that showed a plate and utensils. He could then evaluate what he chose, discard or add to them and explain why he chose those particular foods. Thus, a child could choose a food he recognized and had his own idiosyncratic name for, eliminating the problem of his being able to tell the interviewer the correct name of the food or not choosing it because of shyness about not knowing its name.

Questions about benefits or hazards associated with certain foods were also translated into illustrations to reduce the need for adult-like verbal skills in answering questions.

Each child was interviewed separately and in-person. The majority of the interviews were conducted in schools during recess hours or right after class.

At the outset of the study in January, 1978, a pilot study was conducted in New Jersey among 100 children in kindergarten through third grade (ages 5-8) to test the questions and methodology.

A larger sample of children—608—were interviewed in a follow-up phase of the study fielded in April, 1978. Essentially, the same questionnaire (as pilot study) was used with the addition of some information questions to assess the general level of intelligence of the children interviewed. Basically, these questions were designed to assess whether or not the children interviewed were of normal intelligence. The correspondence between the questionnaires used in the pilot study and the expanded second phase study permitted us to merge the data from the two phases of this study and report here on the findings with regard to a total of 708 children aged 5 through 8 in grades kindergarten through third grade from schools in New Jersey, California, Colorado, Ohio, Louisiana and Massachusetts.

The sample composition was as follows:

SAMPLE

	708	% of Sample
Total Sample		
Kindergarten (5-year-olds)	177	(25%)
First grade (6-year olds)	203	(29%)
Second grade (7-year-olds)	191	(27%)
Third grade (8-year-olds)	137	(19%)
Sex		
Boys	357	(50%)
Girls	351	(50%)
Socio-Economic Status		
Middle class	387	(55%)
Lower class	321	(45%)
Race		
White	570	(81%)
Non-white	138	(19%)

*Second phase of the study, which included 608 children, included 116 (19%) black respondents.

Children were selected by the schools on the basis of quota requirements of age, sex, race, and socioeconomic background. To insure a sufficient representation of children from lower socioeconomic backgrounds, care was taken to include schools with a large percentage of children from this class.

HIGHLIGHTS OF THE FINDINGS

By and large the children studied showed a considerable understanding of the potential benefits and negative effects of the foods about which they were asked.

Although those who were 7 or 8 years old showed generally greater nutritional knowledge that the 5 and 6 year olds (as they do in *most* areas of information) the differences between these children was often relatively small with 5 year olds showing considerable awareness of the rules of good nutrition. For example, in ascribing benefits and disadvantages they associate with various foods and beverages, 95% of *all the children* said "candy was bad for your teeth and gives you cavities," 43% said this was true for soda pop as well, but only 1% ascribed this characteristic to milk (see Table 1).

Table 1 shows that other frequently associated characteristics of candy were "too much makes you sick" and "makes you grow fat." Despite children's love of candy and exposure to TV commercials, most do not think "it gives them energy" (5%), "makes them grow

tall" (3%) or "makes them grow strong" (4%). In fact, 73% of the sample said "candy should be eaten once a week or less often." This is not to say they practice this much restraint. Half the sample stated they eat candy at least a few times a week, but even about two-thirds of these children thought they ought to eat candy less often.

TABLE 1
IDEAS ASSOCIATED WITH SPECIFIC FOODS

Total Respondents	Candy (708) %	Soda (708) %	Milk (708) %	Fruit (708) %	Vege-tables (708) %
Bad for teeth and gives you cavities	95	43	1	5	2
Too much makes you sick	72	64	11	25	14
Makes you grow fat	53	50	8	11	9
Makes you grow strong	4	10	76	67	76
Makes you grow tall	3	13	67	62	70
Gives you energy	5	15	67	70	68
Keeps you healthy so you won't get sick	3	12	68	72	73
Don't know	—	3	1	1	—

NOTE: Totals more than 100% due to multiple responses.

Two-thirds of the children felt "too much soda made you sick" and half said it "made you grow fat." Four out of ten said it "was bad for your teeth and gives you cavities." Over two-thirds of the sample considered milk, fruit and vegetables to be foods that made them "grow strong and tall, gave them energy and kept them healthy."

Variation by Age

As might be expected, children's opinions about foods seemed somewhat influenced by their age. For example, although a majority of the kindergarten children felt soda and candy had some negative attributes, a larger percentage of third graders were aware of these. (See Table 1B.)

In addition, 59% of the third graders felt soda was bad for their teeth as compared with 29% of the kindergartners.

TABLE 1B
IDEAS ASSOCIATED WITH SPECIFIC FOODS
(Among Kindergarten vs. Third Grade Children)

	CANDY		SODA		MILK		FRUIT		VEGETABLES	
	Kinder-garten (177) %	Third (137) %	Kinder-garten (177) %	Third (137) %	Kinder-garten (177) %	Third (137) %	Kinder-garten (177) %	Third (137) %	Kinder-garten (177) %	Third (137) %
Bad for teeth and gives you cavities	89	97	29	51	2	2	10	4	5	2
Too much makes you sick	64	78	50	68	15	11	29	18	19	9
Makes you grow fat	37	65	42	58	14	4	19	4	16	3
Makes you grow strong	11	2	19	2	72	76	72	58	70	79
Makes you grow tall	7	—	25	7	63	67	70	53	65	68
Gives you energy	10	o	22	8	56	72	62	73	56	74
Keeps you healthy so you won't get sick	7	1	18	5	64	67	68	77	67	80
Don't know	—	—	5	2	2	1	2	1	—	—

However, while 97% of the third graders said candy was "bad for their teeth," nearly nine out of ten kindergartners said so as well and both age groups seemed almost equally as aware of milk's attributes.

As many as two-thirds of the 5 year olds said vegetables "keep you healthy so you don't get sick" while eight out of ten of the 8 year olds felt this way.

In general, a high percentage of the youngest children sampled showed considerable awareness about the effects of foods. This percentage increased for older sample members.

There appeared to be no differences in children's opinions about foods by sex, race or economic levels. (See Tables 2-6.)

Children seemed to be aware of the importance of the beneficial qualities in certain foods. For example 88% of the sample felt that children should *drink milk daily*, and greater than nine out of ten felt children should *eat vegetables* at least a few times a week (almost three-fourths felt they should be eaten daily). Similarly, children saw *fruit as something that should be eaten frequently*. More than three-quarters felt it should be eaten at least a few times a week. (See Table 7.) Only 2% of the sample felt children should eat candy every day and only 4% felt children should drink soda daily. Like adults, children may not always do what they believe they "should". (See Table 8.) 50% of the children say they eat candy at least a few times a week but only half that many say candy should be eaten that often.

There were no differences by sex nor by socioeconomic status in children's ideas about how often certain foods should be eaten. (See Table 7.)

Analysis of the responses to the meal selection portion of this questionnaire showed that 50% of the total sample selected some dessert sweet or snack food as an after school or bedtime snack, 26% as part of their lunch meal, 16% as part of their dinner meal and 9% as part of their breakfast.

The most frequent dessert/sweet/snack foods chosen for each occasion are as follows:

Breakfast—Donuts 6%
Lunch—Potato Chips 9%, Cookies 8%
After School Snack—Cookies 23%
Dinner—Ice Cream 5%
Bedtime Snack—Cookies 19%, Ice Cream 16%

The frequency of selection of other snack-dessert foods is shown in Table 10. It should be noted that these children seem to apply sensible nutrition principles, when they were asked to pick "good healthy meals and snacks" and neither chocolate nor hard candy was selected by more than 7% of the children as part of any one healthy meal or snack. No children chose candy at breakfast or dinner; chocolate and hard candy were picked by only 1% of the children at lunch, and by only 4% as a bedtime snack. Hard candy was picked by 6% and chocolate by 7% as after school snacks.

Heavy vs. Light TV Viewers

The great majority of the children in this sample generally watched TV every day (74%) while a minority watched less often (26%). This pattern is similar to that reported by audience research studies and studies of children's use of the popular media (Gollin, 1978).

A comparison of the responses made by those children who watched TV daily (designated as "heavy" viewers) and those who watched less often (designated "lighter" viewers) show no difference at all in their views about what constituted healthy meals. Further, there were no differences between those two types of viewers in the ideas they held about attributes of milk, vegetables, fruit, soda and candy. (Table 11.)

Knowledge of the benefits and hazards associated with these foods was age related with third graders even better informed than kindergartners about the effects of various foods. Yet third graders who are usually eight years of age have been exposed to considerably more TV commercials than have the five year old kindergartners. Thus, greater exposure to TV commercials does not appear to have a cumulative effect. Rather, as Piaget would predict, the ability to use rules of good nutrition to plan good meals is related to age more than to any media to which children are exposed. (Piaget and Indelder, 1973)

TABLE 2
IDEAS ASSOCIATED WITH CANDY

Total Respondents	TOTAL (708) %	SEX Boys (357) %	SEX Girls (351) %	GRADE Kinder-garten 5 (177) %	GRADE First 6 (203) %	GRADE Second 7 (191) %	GRADE Third 8 (137) %	ECONOMIC LEVEL Lower (321) %	ECONOMIC LEVEL Middle (387) %	RACE White (492) %	RACE Non-White (116) %
Bad for teeth and gives you cavities	95	95	94	89	95	97	97	95	94	94	95
Too much makes you sick	72	71	73	64	73	74	78	73	71	71	70
Makes you grow fat	53	48	58	37	52	60	65	53	52	54	53
Gives you energy	5	6	5	10	4	2	6	6	4	4	11
Makes you grow strong	4	3	6	11	5	1	2	4	5	4	5
Keeps you healthy so you won't get sick	3	3	3	7	3	2	1	3	4	4	3
Makes you grow tall	3	3	3	7	3	1	—	3	3	3	3

NOTE: Totals more than 100% due to multiple responses.

Q.2b: What about candy? Which of these things does candy do?

TABLE 3
IDEAS ASSOCIATED WITH SODA

Total Respondents	SEX TOTAL (708) %	SEX Boys (357) %	SEX Girls (351) %	GRADE Kinder-garten (177) %	GRADE First (203) %	GRADE Second (191) %	GRADE Third (137) %	ECONOMIC LEVEL Lower (321) %	ECONOMIC LEVEL Middle (387) %	RACE White (492) %	RACE Non-White (116) %
Too much makes you sick	64	62	66	50	68	72	68	66	63	63	66
Makes you grow fat	50	48	51	42	49	51	58	48	51	49	54
Bad for teeth and gives you cavities	43	44	42	29	42	52	51	42	44	46	28
Gives you energy	15	14	15	22	20	7	8	15	15	15	16
Makes you grow tall	13	13	12	25	12	6	7	12	13	13	14
Keeps you healthy so you won't get sick	12	13	11	18	16	7	5	12	12	12	10
Makes you grow strong	10	11	10	19	12	6	2	12	9	9	16

NOTE: Totals more than 100% due to multiple responses.

Q.2d: What about soda? Which of these things does soda do?

TABLE 4
IDEAS ASSOCIATED WITH VEGETABLES

		SEX		GRADE				ECONOMIC LEVEL		RACE	
Total Respondents	TOTAL (708) %	Boys (357) %	Girls (351) %	Kinder-garten (177) %	First (203) %	Second (191) %	Third (137) %	Lower (321) %	Middle (387) %	White (492) %	Non-White (116) %
Makes you grow strong	76	80	73	70	77	80	79	77	76	76	78
Keeps you healthy so you won't get sick	73	74	73	67	70	78	80	76	71	74	78
Makes you grow tall	70	70	70	65	72	72	68	70	69	70	65
Gives you energy	68	67	69	56	71	71	74	70	66	68	64
Too much makes you sick	14	14	14	19	14	13	9	16	13	12	14
Makes you grow fat	9	9	9	16	10	4	3	13	5	7	12
Bad for teeth and gives you cavities	2	3	1	5	2	—	2	3	3	2	4

NOTE: Totals more than 100% due to multiple responses.

Q.2e: What about vegetables? Which of these things do vegetables do?

TABLE 5
IDEAS ASSOCIATED WITH MILK

Total Respondents	TOTAL (708) %	SEX Boys (357) %	SEX Girls (351) %	GRADE Kinder-garten (177) %	GRADE First (203) %	GRADE Second (191) %	GRADE Third (137) %	ECONOMIC LEVEL Lower (321) %	ECONOMIC LEVEL Middle (387) %	RACE White (492) %	RACE Non-White (116) %
Makes you grow strong	76	74	77	72	77	78	76	74	77	76	73
Keeps you healthy so you won't get sick	68	67	68	64	69	71	67	70	66	69	64
Makes you grow tall	67	65	70	63	70	68	67	68	66	68	66
Gives you energy	67	65	69	56	68	71	72	71	64	66	67
To much makes you sick	11	12	9	15	10	7	11	11	10	10	10
Makes you grow fat	8	10	6	14	5	7	4	9	6	8	10
Bad for teeth and gives you cavities	1	—	1	2	—	—	2	1	1	1	1

NOTE: Totals more than 100% due to multiple responses.

Q.2c: What about milk? Which of these things does milk do?

TABLE 6
IDEAS ASSOCIATED WITH FRUIT

Total Respondents	TOTAL (708) %	SEX Boys (357) %	SEX Girls (351) %	GRADE Kinder-garten (177) %	GRADE First (203) %	GRADE Second (191) %	GRADE Third (137) %	ECONOMIC LEVEL Lower (321) %	ECONOMIC LEVEL Middle (387) %	RACE White (492) %	RACE Non-White (116) %
Keeps you healthy so you won't get sick	72	71	73	68	72	73	77	73	72	73	75
Gives you energy	70	68	71	62	68	76	73	70	70	70	64
Makes you grow strong	67	70	65	72	73	63	58	70	65	66	71
Makes you grow tall	62	62	62	70	68	56	53	61	63	63	60
Too much makes you sick	25	25	24	29	26	24	18	29	20	23	22
Makes you grow fat	11	12	10	19	10	8	4	14	8	10	13
Bad for teeth and gives you cavities	5	6	4	10	6	1	4	7	3	5	5

NOTE: Totals more than 100% due to multiple responses.

Q.2a: Here are some things food can do for you. Some foods do more than other foods. Here's some fruits. Which of these things does fruit do? Does it do any of these or none of these things?

TABLE 7
IDEAS ABOUT HOW OFTEN CHILDREN SHOULD EAT SPECIFIC FOODS

Total Respondents	TOTAL (708) %	SEX Boys (357) %	SEX Girls (351) %	GRADE Kinder-garten (177) 5	GRADE First (203) %	GRADE Second (191) %	GRADE Third (137) %	ECONOMIC LEVEL Lower (321) %	ECONOMIC LEVEL Middle (387) %	RACE White (492) %	RACE Non-White (116) %
Fruit											
Every day	58	56	59	50	58	56	70	55	60	60	46
A few times a week	28	28	27	24	27	32	28	28	28	30	31
Once a week	8	9	8	15	8	7	1	10	7	7	15
Less than once a week	6	7	6	12	7	5	1	8	5	4	8
Candy											
Every day	2	3	3	4	2	2	2	3	3	3	3
A few times a week	21	22	21	23	21	21	21	23	20	23	19
Once a week	43	41	46	47	41	41	44	46	41	44	50
Less than once a week	33	35	31	26	36	36	33	27	38	30	28
Milk											
Every day	88	87	89	83	88	92	90	87	89	90	84
A few times a week	8	9	6	7	8	5	10	8	7	6	12
Once a week	3	3	3	6	3	2	—	3	2	3	3
Less than once a week	2	1	1								
Less than once a week	2	1	2	4	1	1	—	2	1	1	2
Soda Pop											
Every day	4	6	3	8	4	3	2	4	5	4	5
A few times a week	38	38	39	27	41	39	48	40	37	42	33
Once a week	33	30	36	37	32	31	33	37	30	33	42
Less than once a week	24	26	21	27	22	27	17	19	27	20	20
Vegetables											
Every day	72	72	72	65	69	73	83	72	72	74	72
A few times a week	20	19	20	20	20	22	16	19	20	19	22
Once a week	5	4	6	8	7	4	—	6	4	4	6
Less than once a week	3	4	2	6	3	2	1	3	3	2	1

TABLE 8
COMPARISON OF FREQUENCY OF CANDY CONSUMPTION WITH BELIEFS ABOUT APPROPRIATE FREQUENCY OF CANDY CONSUMPTION

	Frequency Candy Eaten (N = 708) %	Frequency Children Should Eat Candy (N = 708) %
Every day	9	9
A few times a week	41	21
Once a week	27	43
Less than once a week	23	33

TABLE 9
FREQUENCY DESSERTS/SWEETS SELECTED
WHEN CHILDREN PLANNED MEALS (NET)

	(N = 708) %
Breakfast	9
Lunch	26
After school snack	50
Dinner	16
Bedtime Snack	52

TABLE 10
SPECIFIC SWEET/SNACK SELECTED
FOR THE MEALS CHILDREN PLANNED

N = Total (708)	Breakfast	Lunch	After School Snack	Dinner	Bedtime Snack
Apple Pie	—	2	3	3	5
Chocolate Candy	—	1	7	—	4
Devil's Food Cake	1	3	10	3	6
Donuts	6	2	8	1	6
Gelatin Dessert	1	2	5	—	4
Hard Candy	—	1	6	1	4
Ice Cream	—	4	11	5	16
Snack Cake	—	1	6	1	3
Cookies	3	8	23	1	19
Potato Chips	—	9	4	1	4

TABLE 11
COMPARISON OF HEAVIER VS. LIGHTER TV VIEWERS
ON IDEAS ASSOCIATED WITH SPECIFIC FOODS

	Candy		Soda		Milk		Fruit		Vegetables	
	Heavier TV Viewer (530)	Lighter TV Viewer (178)	Heavier TV Viewer (530)	Lighter TV Viewer (178)	Heavier TV Viewer (530)	Lighter TV Viewer (178)	Heavier TV Viewer (530)	Lighter TV Viewer (178)	Heavier TV Viewer (530)	Lighter TV Viewer (178)
Bad for your teeth and gives you cavities	96	94	43	43	1	1	4	7	2	1
Too much makes you sick	71	73	63	65	12	10	23	26	15	14
Makes you grow fat	53	53	49	52	8	8	10	12	9	9
Makes you grow strong	4	3	9	12	76	75	68	65	75	77
Makes you grow tall	3	3	12	14	67	67	64	60	69	71
Gives you energy	5	6	15	15	65	68	69	71	67	69
Keeps you healthy so you won't get sick	4	3	11	13	66	69	71	74	72	73
Don't know	—	—	2	4	1	—	1	—	—	—

DISCUSSION

The findings strongly suggest that the considerable time young children spend viewing TV along with TV programming along with attendant TV commercials, does not result in their developing misconceptions about the appropriate role of basic foods like milk, fruit and vegetables in the diet, nor of treats like candy and carbonated drinks. The home and school seem to be more important influences on the ideas children accept about good nutritional habits.

The fact that children do not always follow the good nutritional rules they recognize suggests that their habits, ambivalent feelings and problems in self-discipline are probably similar to those manifested by adults with regard to this issue. Furthermore, failure of both children and adults to always follow the rules of good nutrition is a problem that certainly predates television and cannot reasonably be laid at its doorstep.

The role TV plays in what children choose to eat and drink is clearly not a simple one. Data shows that TV does not create incorrect views about nutrition. Whether it is a stimulus to overindulge in some foods like sweets is also questionable in view of the decline in the consumption of candy in the United States over the past several decades despite the advertising on TV. Candy commercials have proved to be effective in attracting consumers to a brand and holding brand loyalty, but have not been shown to increase consumption of the product category.

Nevertheless, there is still much to be learned about the role TV can or might play in the development of children's nutritional habits. Results of attempts to use television commercials to communicate positive social messages and influence youngsters to make choices beneficial to their health (Public Service Announcements) have not been very encouraging. Such public service announcements appear to have some slight effects on children in reinforcing the ideas they already accept and probably learned in the home or schools but have little impact on children who do not already accept the content of the message.

SUMMARY AND CONCLUSIONS

1. Children showed considerable awareness of the benefits and hazards of major foods and beverages.

They perceive milk, fruits, and vegetables as basically beneficial to their health and development, and as foods they should have daily or several times per week. By contrast, the great majority felt candy and soda pop could hurt their teeth, make them fat, and that too much could make them sick. In addition, when given the opportunity, children did not associate candy and soda pop with the positive qualities they attributed to milk, fruit and vegetables.

2. Older children knew somewhat more about the nutritional benefits and disadvantages of foods than younger children despite more exposure over the years to TV sweets/snack commercials. Knowledge increased slightly at each age, but even among the youngest group (5 year olds) the majority knew much about the rules of good nutrition.
3. Half the children said they eat candy at least a few times a week and half reported eating candy less often. Nevertheless, three-quarters said children should eat candy only once a week. Even the heavy candy eaters said they should eat less candy. Awareness that too much candy eating may cause cavities was very prevalent among all ages (9 out of 10 children in the sample were aware of this concern about sweets).
4. Three-fourths of the children said they viewed TV daily and, therefore, probably see many commercials for sweets and carbonated beverages. Yet they did not associate a good nutritional image with these foods and beverages, nor did they feel they are part of "healthy meals." In planning one day's food, they tended to confine candy to snacks, with only 7% of children including candy in any part of one day's food.
5. There were no differences in nutritional knowledge found in comparing the heaviest TV viewers with lighter viewers.

The data suggests that for children the development and growth of understanding of the benefits and hazards of various foods and the proper use of them in planning meals is primarily age related and not readily interfered with by the TV commercials children typically see on U.S. TV screens.

REFERENCES

Adler, R.P. et al (1977) *Research on the Effects of Television Advertising on Children*, Washington, D.C.: National Science Foundation.

Flavell, J.H. (1977) *Cognitive Development*, Englewood Cliffs, New Jersey: Prentice-Hall.

Gollin, A.E. and Anderson, T. (1980) *Mass Media in the Family Setting*, New York: Newspaper Advertising Bureau.

Klapper, J. (1960) *The Effects of Mass Communication*, Free Press: Glencoe, IL.

Piaget, J. and Inhelder, B. (1973), *Memory and Intelligence*, New York: Basic Books.

CHAPTER 9

The Young Child as Consumer

ELLEN WARTELLA

Written in conjunction with Daniel B. Wackman, Scott Ward, Jacob Shamir and Alison Alexander

AUTHORS' NOTE: The research reported here was supported by Grant No. APR 76-20770 from the National Science Foundation.

Reprinted from *CHILDREN COMMUNICATING: Media & Development of Thought, Speech, Understanding.* Sage Annual Reviews of Communication Research, Volume 7, 1979.

ELLEN WARTELLA

The Young Child as Consumer

Government regulators, consumer advocates, major children's advertisers, and consumer educators all are interested in discovering how children acquire and use information about consumer products, especially that contained in advertising to which they are exposed. Similarly, as communication researchers, we have focused attention on children's reactions to advertising stimuli in an attempt to examine how children of different ages process television information and the kinds of particular processing demands advertising places on the child viewers. In this chapter we will discuss some new directions our research is taking in attempting to meld pressing public policy, marketing, and educational questions with broader theoretical and methodological issues in studying children's consumer information processing activities. Specifically, we will examine young children's consumer activities in two areas: first; how they represent, i.e., select, interpret, and make sense of advertising information; and second, how they utilize product choice strategies.

The notions presented here are an extension and elaboration of our previous work on children's consumer information processing (Ward et al., 1977). The basic model of information processing outlined in this previous research relied heavily on Piaget's theory of cognitive development to suggest major dimensions along which children younger and older than middle childhood vary. Perhaps best known of these dimensions is that of perceptual boundedness: younger children's tendency to focus on the perceptual and surface characteristics of products and advertisements (Wartella and Ettema, 1974; Ward and Wackman, 1973). We have viewed these dimensions of cognitive growth and the general cognitive abilities

196

available to children as "rules for processing information" at various levels of cognitive development (Kohlberg, 1969).

This initial conceptual model followed rather strictly Piaget's theory and was useful in isolating the general distinctions among grade school children's knowledge about TV advertising and products. For instance, between kindergarten and sixth grade, children acquire greater understanding of the purpose of advertising; they tend to select both more and varied kinds of information when recalling a television commercial and describing a product; and they gradually use multiple attributes when comparing brands of a product group (Ward et al., 1977): Chaps. 3-4).

Piaget's theory is often interpreted as essentially a theory of deficits, i.e., children of a certain cognitive stage are seen as being unable to perform mental operations more characteristic of another stage. Piaget has contributed to this emphasis by making a number of predictions concerning children's inability to perform various cognitive tasks until reaching a certain age. These predictions are not always supported by the data (Case, 1974).

This deficit-oriented emphasis has had a profound influence on cognitive development research. Our own research has developed with this kind of deficit emphasis. Indeed, the notion of centration which we have used, describes how young kindergarten children tend to focus on less than all of the available information when either attending to an advertisement or making a consumer choice (Ward et al., 1977).

More recently, however, various cognitive developmental theorists and researchers have been shifting their research emphasis from concentrating on cognitive deficits of young children to examination of the conditions under which younger children's performance can be facilitated. For instance, in memory development research, Flavell's (1970) distinction between mediational and production deficiencies illustrates this shift quite well. A child is said to have a mediational deficiency for a particular cognitive operation if his execution of it does not facilitate recall. This is similar to a cognitive deficit. On the other hand, a child is said to have a production deficiency if he fails to produce a cognitive strategy on his own for reasons other than lack of ability or skillfulness. Thus, instead of focusing on younger children's inability to perform certain operations, i.e., searching for mediational deficiencies, increasingly researchers are focusing on *conditions facilitating the performance*

of the operations, searching for production deficiencies (Flavell, 1977). Crucial in the research perspective is researcher attention to the informational demands of the experimental tasks utilized (Pascual-Leone, 1970). For instance, it has been found that young children are able to perform rather sophisticated cognitive operations when conditions are "right," but under normal conditions they do not perform these operations (Case, 1974; Brown, 1975a). Thus, in terms of their typical spontaneous behavior, young children may have rather low level cognitive response patterns. Under other circumstances, children, even kindergarteners, may perform at higher levels.

These studies suggest then that in research on children's consumer activities, two crucial coneptual clarifications must be made: first, the information processing demands of the processing tasks should be clearly delineated; and second, the conditions which facilitate optimal performance in a task should be examined. These two distinctions have informed and guided our current research in the two areas of how children understand television advertising and how children make product choices. In the remainder of this chapter, elaboration of these distinctions in the context of studying young children's consumer activities will be made: first, in the area of how children represent, i.e., select, interpret, and understand, television advertising; and second, in presenting a new approach to examining young children's product choice strategies.

CONSUMER TASKS: WATCHING TELEVISION ADVERTISING AND CHOOSING PRODUCTS

In our previous research we examined children's information processing transituationally: i.e., the same mental processes intervening between the input of a stimulus and the child's output of a response were assumed to occur both in the television viewing situation and in product choice situations. Consequently, we tended to focus on information processing activities which were similar in both task situations. For example, information selection from an advertisement was operationally defined as recall of elements in a commercial, and information selection about products was operationally defined as the kind of attributes children focus on when they are asked to consider buying a new product (Ward et al., 1977). For purposes of describing general characteristics of

children's thought about the consumer environment, this conceptual and methodological approach proved useful.

However, as Dawes (1975) points out, any model of information processing is necessarily circumscribed by the task being modeled. In particular, problem-solving tasks (Berlyne, 1970). While many of the same mental activities are involved in both situations, the task posed for the child information processor is probably much different. Similarly, television watching and choosing products are probably very different tasks for the young child since a major distinction between the television viewing situation and the product choice situation is the degree to which each task is problem-oriented, wherein the child is seeking information to reach some solution or decision, such as a product choice.

It would seem reasonable to assume that in most instances when young, grade-school children sit down in front of a TV set and watch a commercial, there is little "intention" to seek information to use in a purchase decision. This assumption is based on the evidence of relatively low comprehension of the purpose of advertising as a source of new product information across a wide range of products (Ward et al., 1977). [1] Such directed and planful use of television advertising probably occurs only rarely, and most likely at particular times during the year, such as Christmas time when children are seeking gift ideas (Caron and Ward, 1975). On the other hand, when children are asked to "choose" a cereal at the store or are given money to spend on a product of their choice, the information processing task at hand involves directed thinking activities and intentional use of information to solve a problem, i.e., to "buy" the product that "best" satisfies the child's needs or desires.

This is not to say that children do not use information which they have learned from television viewing influences product requests at Christmas time (Robertson and Rossiter, 1977). This suggests that viewing TV advertising may directly affect product choice by influencing the child to buy a particular product, i.e., by raising the salience of product X above all other brands of a product group. Alternatively, TV advertising may influence the child's strategy for approaching a product decision by suggesting certain attributes of brands in a product class to be considered, i.e., suggesting that the child buy the brand of a product that has the *most* of attribute X (Wright and Barbour, 1975).

However, the crucial point is that television advertising most likely enters product decision-making tasks sometime after viewing the television advertisement even if during TV commercial viewing, the child's desires for a product is raised. This suggests that we should examine children's memory of what they have seen and heard from television commercials, because it is what they have stored and retrieved from memory which will influence their processing activities at the time of product decision-making, while models of problem-solving activities might be most useful for examining children's product choice strategies. First, let us consider a conceptualization of young children's memory for a television advertisement, and findings from a study utilizing this conceptualization.

CONCEPTUALIZING MEMORY OF CHILDREN'S ADVERTISEMENTS

In examining how children represent advertising information in their memory, we have relied on a view of memory which distinguishes between two types of memory: episodic memory or memory for a specific event which occurred at a specific time and place; and semantic memory, or the accumulated knowledge one has acquired about the world (Brown, 1975b). Piaget and Inhelder (1973) refer to the former as "memory in the strict sense" and the latter as "memory in the wider sense." Episodic memory involves memory for directly experienced occurrences, the actual input or verbatim recollection of experience and "for discrete perceptual instances that are distinct and separable from the larger unit in which they occur" (Brown, 1975b:136). Thus, episodic memory is usually what is referred to as verbatim memory for a television commercial or program, because it involves remembering the elements of the television commercial. On the other hand, Brown (1975b) notes that semantic memory involves "memory for meaningful systems of units in context." Such memory is constructive and holistic and it is memory for the gist of the narrative or story, such as the overall "message" a viewer constructs from a TV commercial.

Further, as Brown (1975b) points out, no particular interaction with an environmental stimulus is totally one type of memory experience or the other for a child; aspects of both episodic and

semantic memory are involved whenever a child interacts with the environment. Children's semantic memory system, in the broadest sense their acquired knowledge about the world and their attendant cognitive abilities, skills, and language, helps determine what they will "remember" about any specific episode or occurrence, i.e., it influences children's episodic memory: "What the head knows has an enormous effect on what the head learns and remembers" (Flavell, 1977:189).

This perspective maintains that memory is a constructive process. Memory "involves an imaginative reconstruction or construction built on extant knowledge" (Brown, 1975b). Both at the point of storing and retrieving information from memory, the subject is constructing and reconstructing an internal representation of that information to be remembered (Paris, 1975).

One result of this constructive aspect of memory is that children attempt to integrate information they remember to comprehend the "gist" of the stimuli presented (Paris, 1975). Children integrate semantic information to construct a holistic meaning of that information. They go beyond the information given to integrate ideas and form inferences. Further, as Paris (1975) points out, children's integration of information is sometimes at the expense of correct recognition of information they had actually seen or heard.

The perspective on memory outlined above has a very basic implication for research on children's information processing of television advertisements: as researchers, we should examine more than children's verbatim or episodic memory for particular elements of commercials, such as brand name or product attributes mentioned. Examination must be made of the kinds of inferences and connections children make when integrating the advertised information into their semantic memory system, i.e., what overall message do the children take away from the commercial? Even in the absence of children's faithful and accurate retrieval of specific elements from an advertised message, these children may still "remember" some constructed or integrated meaning from the message. It may be this "constructed meaning" from the message which children recollect from the advertisement during product decision-making situations.

How best can researchers measure children's memory for the television advertisement? What measurement procedures should be used to avoid interpreting a production deficit, i.e., poor retrieval

of information which is stored in memory rather than a true mediational deficit (i.e., no memory for the information)? Particularly, the issue becomes quite thorny when young children such as kindergarteners are subjects of investigation.

Measurement of children's memory for television advertising information has typically employed open-ended recall measures (Rossiter, 1975; Rubin, 1972; Ward et al., 1977). Furthermore, researchers have focused primarily on verbal memory to the neglect of visual memory (Rossiter, 1975). Although the particular modality used to code information in memory is still open to debate (Bransford and McCarrell, 1974; Brown 1975; Piaget and Inhelder, 1973), it seems reasonable to allow for the possibility of mulitple forms of representation—visual, verbal, and imaginal. As Rossiter (1975) has suggested, multiple memory codes should be measured.

The issue of how best to measure retrieval of information from memory may deserve more attention than previous research on advertising and children has acknowledged. Particularly, more attention should be paid to the distinctions between recall and recognition memory. While researchers may tend to think of recall and recognition questions as measurement tools, recall and recognition activities also constitute types of retrieval activities for the subject being interviewed. Moreover, recall and recognition memory place different task demands on the subject for actively retrieving information from memory.

Recognition involves external memory cues for the child, such that there is already something present in immediate experience to assist the retrieval process. There are no such external cues present in recall memory. In recall, the subject has to do more of the retrieval job himself; "Recall is the more difficult process as it demands regeneration in the absence of the stimulus" (Brown, 1975:111). Piaget (1968) and Brown (1975) have proposed that there is a developmental progression in the development of these retrieval activities, such that recognition memory develops earlier in the child than does recall memory. Several studies provide evidence that recognition is a more efficient memorial process than recall for children younger than middle childhood (Brown, 1975; Ritter et al., 1973; Kobasigawa, 1974). This research literature suggests that both recognition and recall measures should be used to examine young children's memory for television advertising infor-

mation. It may be the case that previous research has underestimated what young children are remembering from television. In the next section of this chapter, we will consider some research findings on children's memory for television advertisements utilizing the conceptual and methodological distinctions in memory development identified here.

RESEARCH FINDINGS ON CHILDREN'S MEMORY FOR TELEVISION ADVERTISEMENTS

In the past two years, we have been engaged in a series of experiments designed to examine kindergarten and third grade children's information processing of several specially produced commercials for hypothetical brands of candy and game products. In one study in Columbus, Ohio, 76 kindergarteners and 84 third graders were shown in small groups a one-half hour videotaped cartoon show in which commercials for two hypothetical chocolate covered raisin candy products, Yummies and Gobbles, were included. The children came from a middle class suburban school district and were tested in their schools.

The commercials shown the children varied along two dimensions. One of the dimensions varied the type of appeal made in the ad: product appeals stressed the ingredients and health attributes of the product; social appeals stressed personal benefits or attributes the child would incur from using the product, such as making friends. A second dimension manipulated the mode of presentation of these appeals: the information was presented either audiovisually, just visually, or just audially. Thus, both the number and kind of product attributes mentioned in the commercials and the overall intended message of the commercials which the child viewed were manipulated. Each child had three exposures to a product attribute appeal for one brand and three exposures to a social acceptability commercial for another brand of the candy.

A post-viewing interview was designed to tap those aspects of memory which we have discussed, i.e., children's episodic and semantic memory for the advertising information. The general question strategy used in assessing children's memory for specific elements of the commercials began each type of question about a commercial or product attribute with a recall measure (e.g., "What product did the commercial show you?"). If the child was unable to

retrieve completely the commercial information, a multiple choice recognition item was then asked (e.g., "Was it: (a) a raisin candy, (b) a chocolate covered raisin, or (c) a chocolate covered peanut?"). Thus, through a revolving sequence of recall and visual and verbal recognition measures, children remembered both about the product advertised and the narrative message presented in the commercial.

In addition, we attempted to assess how young children might go beyond the information given in the television commercial, i.e., to assess their semantic memory for the commercial. For instance, two measures we utilized were to ask the child first, "What does this commercial want you to know about Yummies/Gobbles?" and second, "What does this commercial want you to do?" Thus, we were interested in examining the kinds of connections and inferences the children might make between the commercial information and their own consumer behavior.

Let us consider the data regarding the children's overall impression from the commercials first. For purposes of this chapter, the data from the Columbus study will be presented in terms of children's memory for the two types of commercial appeals: product attribute appeal (PA) commercials, and social acceptability appeal (SA) commercials.

The most striking finding regarding the question "What does this commercial want you to know?" is the children's difficulty in answering it: more than half of the kindergarteners for both PA and SA commercials did not respond to this question, as opposed to about 10% of the third grade children. Similarly, for the question "What does this commercial want you to do?" 40% of the kindergarteners did not respond when discussing product attribute commercials and 47% did not respond when discussing social acceptability commercials. On the other hand, a negligible percentage of third graders did not respond to this item—about 5%.

When children did answer the question, the most frequent response for both age groups (between one-quarter and one-half of the children across appeal type) was to mention a specific product attribute of commercial element. A second major category or response was a general affective response, e.g., "This commercial wants you to like the product."

Lastly, when children did answer the question regarding what the commercial wanted them to do, about four-fifths of the third

graders for both PA and SA commercials responded "buy the product." About 50% of the kindergarteners for PA commercials and two-thirds of the kindergarteners for SA commercials also said this. The next most frequent type of response for both age groups was that "The commercial wants you to try them or eat them."

The impression these data make are that nearly half of the kindergarten children are not taking away much of the "gist" of the commercials, at least not as evidenced by the way in which we attempted to measure semantic or wholistic memory for the commercials. The message children do articulate is that the commercial wants you to like and buy the product advertised.

While it may be argued that the children may just not be retrieving or remembering much of the commercial after only three exposures, examination of the data on children's memory for discrete product elements indicates that this is not really the case, although as previous research has shown, third graders do recollect more of the discrete information in the commercial than do the kindergarteners. For instance, when you examine children's accuracy in either recalling or recognizing particular attributes mentioned about the products in the commercials, such as "What's a Yummie/Gobble?" or "How many candies are there in a box?" about half the kindergarteners and about three-quarters of the third graders accurately recollect more than three of the six different product elements measured for each appeal type.

Moreover, of interest here is that, if only recall measures of children's memory were taken, we would be underestimating the kindergarteners' performance. For instance, Table 1 (see page 206) presents the percentage of kindergarten and third grade children accurately recollecting product attribute information from both the product attribute appeal and social acceptability appeal commercials. The data differentiate between those children accurately and completely recalling the information and those accurately recognizing the correct answers. As this table indicates, third graders show better memory overall of the advertised product than do kindergarteners, particularly when recall measures are employed. However, when recognition measures are used, the percentage of kindergarteners remembering the commercial product elements improves considerably.

Thus, again, to assess accurately young children's optimal performance in remembering the advertised information, it is crucial

TABLE 1
KINDERGARTENER AND THIRD GRADER RECALL AND RECOGNITION OF PRODUCT ATTRIBUTE INFORMATION FROM PRODUCT ATTRIBUTE APPEAL (PA) COMMERCIALS AND SOCIAL ACCEPTABILITY APPEAL (SA) COMMERCIALS

	SA Commercial		PA Commercial	
	K	3	K	3
1. What is a Yummie/ Gobble?				
Recall	28%	74%	36%	83%
Recognition	35%	11%	25%	7%
No complete retrieval	37%	15%	39%	10%
	N=71	N=82	N=72	N=80
2. How many raisins are in a single Yummie/Gobble?				
Recall	38%	80%	44%	78%
Recognition	22%	9%	15%	7%
No complete retrieval	37%	15%	39%	10%
	N=69	N=81	N=72	N=80
3. How many Yummie/ Gobbles in a box?				
Recall	0%	11%	1%	13%
Recognition	27%	38%	27%	41%
No complete retrieval	73%	51%	72%	46%
	N=71	N=82	N=71	N=79
4. How is Yummie/ Gobble made?*				
Recall			29%	62%
Recognition			24%	14%
No complete retrieval			47%	24%
			N=71	N=79

*NOTE: This question was not asked about SA commercials.

to assess their memory through use of more than recall measures. Otherwise, we might underestimate the young children's learning from the advertisement.

These data are provided to illustrate the importance of the conceptual distinctions we have made in our continuing research pro-

gram. We are continuing to analyze our experimental data with regard to more accurately assessing young children's optimal performance in recollecting television advertising.

Furthermore, the conceptual clarifications of adequate task analysis and assessment of optimal performance on tasks are addressed in a new approach to studying children's consumer choice decision-making. In our current research we are attempting to distinguish and clarify those processes involved in choice situations, the kinds of choice strategies children use. Below, in considerable detail, we will consider a new approach to studying how young children engage in consumer choice strategies in an experimental setting. The procedure to be discussed was part of the overall series of experiments examining young children's consumer information processing.

CONCEPTUALIZING CHILDREN'S PRODUCT CHOICE DECISIONS

In order to conceptualize how children utilize information in reaching product choices, the kinds of decision strategies they use, and the consistency of their use of particular strategies, we began our analysis of product choice tasks by examining the adult literature on consumer decision-making. Specifically, we relied heavily on multiattribute models of product choices (Wilkie and Pessemier, 1973; Holbrook and Hulbert, 1975; and Hansen, 1976). Such research has typically utilized a preference rating approach to measuring choice strategies. Measures of adults' judgments of the importance of a product attribute or a value dimension are combined with measures of the extent to which subjects believe different brands possess the attribute or fulfill a particular value. Then, by applying various averaging or adding rules which represent specific data combination processes, predictions are made concerning the subject's preference scores for the different brands. The specific process used is then validated against measures of overall brand preference. In this adult research, the data combination processes are usually assumed to be equivalent to choice strategies.

However, there are two major dimensions characterizing any data combination process. First is the amount of information used. Some data combination processes use all of the available information, e.g., those defined as a weighted averaging compensatory model, while others may use only minimal information, at least in

some circumstances, e.g., those defined as lexicographic or sequential elimination models.

Second, and more importantly, is *how* information is used. Some models, such as compensatory models, involve object comparisons, i.e., all information about each individual option is combined together to develop a series of overall evaluations of the options before the options are compared to each other. Other strategies, such as lexicographic and sequential-elimination models, involve essentially attribute comparisons, i.e., options are compared on the basis of information about a single attribute or a series of attributes, taken one at a time. This distinction is similar to that used in analyses of consumers' information behavior, i.e., interdimensional search or intradimensional search strategies (Payne, 1976). We wanted to clearly distinguish these two dimensions, given our expectations of how young children make product choices.

We expected children's use of product choice strategies to reflect the kinds of differences we have found in our earlier research on use of product information. First, young children are likely to use less information in making choices and, furthermore, are less likely to use more abstract information, such as attribute importance information (Ward et al., 1977). Second, children younger than middle childhood appear to have great difficulty performing the cognitive operation of compensation, i.e., recognition that one action or dimension in a perceptual task can counterbalance another action or dimension (Flavell, 1977), whereas older children are able to do so more easily, at least as evidenced by performance on various conservation tasks. Expressed in quasi-mathematical terms, this would suggest that young chilren cannot perform averaging operations very easily. Therefore, they may have substantial difficulty using various compensatory choice strategies.

However, several recent studies have indicated that young children do average when developing preference ratings of consumer products and people (Butzin and Anderson, 1973; Hendrick et al., 1975). In both studies subjects were asked to integrate two items of information. However, when kindergarteners were asked to integrate more information, they did not use a consistent averaging strategy (Capon and Kuhn, 1978). Findings from these studies perhaps indicate that young children may experience a production deficiency in performing an averaging operation when the informational task is expanded beyond a small number of "bits."

Third, kindergarten and third grade children also differ in performing ordering operations. Kindergarteners can order objects, but they appear to lack an overall plan or guiding principle when they do so (Inhelder and Piaget, 1964). On the other hand, third graders appear to construct orderings on the basis of a plan or consistent principle, Differences in performance of this operation suggest that younger children are likely to have more difficulty in using strategies which involve hierarchical ordering of attributes, such as a lexicographic strategy.

Thus, our general expectations regarding children's use of choice strategies were that older, third grade children should use choice strategies which utilize more and more abstract information than those used by younger, kindergarten children, and older children should use consistent choice strategies as compared to younger children. We were also interested in examining the range of different kinds of decision strategies kindergarten and third grade children use.

MEASURING CHILDREN'S PRODUCT CHOICE STRATEGIES

A rather elaborate measurement procedure was developed to assess children's strategy use. It manipulated two aspects of product information: the importance of attributes and the amount of the attributes included in a particular candy. Five candy attributes were used—chocolate, caramel, raisins, peanuts, and licorice. Each attribute was differentiated from the other visually in two ways: shape and color.

Attribute importance information was manipulated by telling the child to imagine that she or he was to choose a present for a friend who likes chocolate very much and raisins and peanuts somewhat less. Information about the importance of the two other attributes—caramel, an even more important attribute than chocolate, and licorice, an unimportant attribute—was introduced in a similar fashion later in the interview. Visual reminders in the form of smiling faces for amount of liking were displayed on cards before the child throughout the measurement process.

Importance information was assigned to the subject's hypothetical friend (John/Mary in order to minimize the effect of the subject's own attribute preference on his choices.) Furthermore, importance "weights" were assigned in order to create an ordering

such that chocolate would be seen as only slightly more important than raisins and peanuts. This was done in order to provide a relatively sensitive test of a sophisticated compensatory model—a weighted adding strategy. Similarly, licorice was assigned much less importance than the other attributes in order to provide a robust test of a low information model—what we call an amount strategy.

Amounts of attributes which the hypothetical candies contain were manipulated by showing a card to the child. Generally, five pieces of the attribute were used to indicate a large amount of an attribute and two indicated a small amount. Each candy contained anywhere from one to three attributes. Subjects were asked to choose a candy for their friend from among the two or three candies displayed on each card. These were verbally described by the experimenter. For example, in describing Card #2, the experimen-

> Candy C has a little chocolate (E points at chocolate in Candy C) and a lot of raisins (E points at raisins in Candy C).
>
> Candy D has a little chocolate (E points at chocolate in Candy D) and a few raisins (E points at raisins in Candy D).
>
> Which one do you think John/Mary will like better—this one (E points to Candy C) or this one (E points to Candy D)?

Subjects were provided the set of choices represented by the eight cards shown in Figure 1. The first card was a warm-up for the child, but the remaining seven cards all contributed to our measure of choice strategies.

To measure various strategies, we constructed the specific set of cards used by first identifying a number of plausible choice strategies (Wright, 1975). The strategies we identified were the following, ordered in terms of the amount and kind of information used:

1. Amount—choice based on total number of items contained in candy; no differentiation of attributes.
2. Best Single Attribute—choice based only on the amount of the single most important attribute contained in the candy.
3. Variety—choice based on the number of attributes a candy contains; total amount of candy and amount of each attribute are irrelevant.
4. Lexicographic—choice based on the amount of the most important attribute, but if the options are tied on this attrib-

ute, choice is based on the amount of the second most important attribute.

5. Weighted Adding—choice based on the sum of the products of the importance weights and amounts of all the attributes contained by each candy; choose the option with the highest score. (This assumes a subject applies a metric similar to the one we manipulated.)

We then developed a series of cards which would do two things: (1) indicate the consistent use of each strategy in terms of a pattern of choices; (2) distinguish each strategy from every other one by at least one choice, and sometimes two.

For example, the lexicographic strategy involved the following series of choices on cards two through eight: C, E, G, K, M, T, and X. The weighted adding strategy involved the following series of choices: C, F, G, K, M, T, and X. As we can see, these two patterns were the same except for the choice on Card 3: subjects using a lexicographic strategy would choose Candy E to maximize the most important attribute, chocolate; subjects using a weighted adding strategy would choose Candy F to maximize the overall value of the candy.

This measure enables us to identify which specific strategy each subject uses *on the basis of his choices alone.* It has other features as well, however. It is designed so that lower information strategies would not always provide a choice. For example, on two cards—numbers 6 and 7—an amount strategy will not provide a clear choice. Therefore, subjects who prefer this strategy must shift to another strategy at this point. Subjects who prefer to use a best single attribute strategy cannot make a clear choice at Card 2. Subjects using a variety strategy cannot make a clear choice at Cards 2 or 7.

In classifying subjects in terms of the strategy they used, we did *not* demand complete consistency for all relevant choices. Rather, we classified those subjects as users of a strategy if their pattern of choice was consistent with the designated pattern with no more than one exception. Thus, classifying a subject as a user of a specific strategy indicated the subject's choices were entirely consistent with the strategy or deviated only one time.

One further aspect of our methodology should be noted. After a subject made each choice, he was asked why he made the choice he did.

CHILDREN'S USE OF PRODUCT CHOICE STRATEGIES

Fifty-four kindergarteners and 165 third graders were tested using the above product choice measure. All came from middle class suburban schools: the kindergarteners from Columbus, Ohio, and third graders from Ohio and St. Paul, Minnesota. As we expected, more third graders were classified as strategy users (i.e., they had a highly consistent choice patter), 94% compared to 83% of the kindergarteners (x^2-6.5, df. 1, $p = .01$). However, more important than the difference is the finding that such a large percentage of *both* age groups exhibit consistent patterns.

However, as Table 2 indicates, there are major differences between the kindergarteners and third graders in their use of choice strategies. Fully 70% of the kindergarteners use an amount strategy involving no attribute information, compared to 18% of the Ohio third graders and 6% of the Minnesota third graders. On the other end of the scale, only one of the kindergarteners used a strategy which involves attributes ordered by importance, compared to 25% of the Ohio and 26% of the Minnesota third graders. Twenty-eight percent of the kindergarteners did take attribute importance into account to some extent by using either a best single attribute or variety strategy; however, much larger percentages of third graders did so—57% of the Ohio and 68% of the Minnesota third graders. Validation for our classification of children as users of specific strategies comes from the children's verbal descriptions of their reasons for each choice. These descriptions were coded in terms of the same five strategies. For each group, we compared the percentage of children who were consistent strategy users and who verbalized this strategy frequently (i.e., three or more times).[2]

Examining kindergarteners, we find that 74% of the children classified as amount users also verbalized this strategy frequently, compared to only 28% of the other kindergarteners ($x^2 = 12.3$, df. 1, $p < .001$). Similarly, two-thirds of the kindergarteners classified as best single attribute users expressed this strategy frequently compared to 18% of the other kindergarteners ($x^2 = 9.5$, df. 1, $p < .001$). Comparisons for the third graders show similar results.

Both the choice pattern and verbalization measures strongly support our expectations that older children are much more likely to use attribute importance information in making choices than are

younger children. Indeed, much of the data suggests that most kindergarteners simply do not use this kind of information. Let us examine this more closely, however, by looking at the strategies that amount-strategy kindergarteners shift to when their preferred strategy does not provide a choice.

Up until Card 6, amount users could consistently apply their simple strategy because on each card this strategy provided a clear choice. However, on Card 6, each of the options contained six items (there was no product wnich had more of an attribute). Among the kindergarteners, only 37% shifted to a strategy involving the use of the given attribute importance information, as indexed by their verbal description.

These results would appear to suggest that a large number of kindergarteners had a mediating deficiency—a cognitive deficit—preventing them from incorporating attribute importance information in their choice strategies. However, as we shall see by examining their choice strategies on Card 7, this is probably not the case.

Before the children were presented with Card 7, new attribute information was introduced and the experimenter reviewed the subject's understanding of the attribute importance information introduced previously. *All* subjects correctly answered the questions indicating that they were aware of the attribute importance information without being reminded. Then the experimenter said:

> Now imagine that your friend John/Mary likes caramel even more than chocolate, so s/he likes caramel most of all. You see there is a very big smile on the caramel face: s/he likes caramel even more than chocolate.

Essentially, what is being done here is solidly reinforcing the salience of attribute importance information. We are, in effect, creating a condition which makes it easier for the child to recognize the relevance of this information so that when his preferred strategy does not provide a choice, the cues help him shift to another strategy. Thus, when amount users face the equal amounts of candy in Card 7, it is likely that they will apply a best single attribute strategy—unless they have a cognitive deficit. The results clearly indicate that the great majority of kindergarteners do *not* have a cognitive deficit preventing them from using attribute

CANDY A
CANDY B
CARD 1

CANDY C
CANDY D
CARD 2

CANDY E
CANDY F
CARD 3

CANDY G
CANDY H
CANDY I
CARD 4

CANDY K
CANDY L
CARD 5

CANDY M
CANDY P
CANDY R
CARD 6

CANDY S
CANDY T
CARD 7

CANDY X
CANDY Y

importance information. In fact, 35 of the 38 kindergarten amount users expressed a best single attribute strategy in Card 7.

However, the fragile nature of these kindergarteners' use of this strategy is indicated by their choices and verbalizations in Card 8. Before this card was presented to the subjects, they were told that licorice was the candy least favored by their friend. But Card 8 contained a major discrepancy in terms of the total number of items, with 22 pieces of licorice compared to 10 items of chocolate (5) and caramel (5). In their choice on Card 8, 21 of the 38 amount users chose the licorice candy, totally ignoring the attribute importance information and verbally 20 of the kindergarteners indicated they were using an amount strategy.

These children were responding heavily to the perceptual features of the choice situation, but it is important to note that this is *not* just a methodological effect. A great deal of evidence suggests that the younger child is highly susceptible to perceptual aspects of his environment, perhaps relying too heavily on these aspects in many situations. In the research setting we utilized, many kindergarteners clearly responded to the number of items, a dominating perceptual feature. In real consumption situations, they are equally likely to respond to perceptual features, such as the size of the box, presence of a premium in the product, and so forth.

The pattern of responses of the amount strategy kindergarteners in Cards 6, 7, and 8 suggests that their use of a limited information strategy is not due to mediational deficiency—a cognitive deficit. Rather it is due to a production deficiency which can be counteracted, as their strategy in responding to Card 7 indicates.

Besides examining shifts in strategy made by subjects whose preferred strategy provided no clear choice on a particular card, we were also able to examine certain features of higher information strategy users, i.e., children who used a lexicographic or weighted adding strategy. In these analyses we were interested in the extent to which the subjects indicated they had used their preferred strategy in their verbalizations or had used another strategy instead.

We found that those choices involving more complex information were handled differently from choices with simpler information arrays. For example, Card 5 involved a relatively complex information array. In this choice 71% of the high information users provided verbal descriptions of their strategy which were coded as

TABLE 2
CHILDREN'S CHOICE STRATEGIES BY AGE

Choice Strategies	Ohio Kindergarteners %	Ohio Third Graders %	Minnesota Third Graders %
Amount	70	18	6
Best single attribute	22	29	41
Variety	6	28	27
Lexicographic	2	22	21
Weighted adding	0	3	5
	100	100	100
Sample size	54	65	100

high information strategies (lexicographic or weighted adding). On the other hand, for Cards 6 and 8, which involved less complex information arrays, more than half of the high information users indicated utilization of lower information strategies through their verbal descriptions.

These results suggest that high information strategy users may be just as sensitive to situational factors as children who prefer to use strategies involving lower levels of information. It may be the case, for example, that when a choice situation is relatively simple and does not require the use of elaborate information integration, high information strategy users will indeed utilize a simpler strategy, such as best single attribute or variety, which will yield the same choice as a more complex strategy. On the other hand, when faced with more complex information, they move easily to a higher information strategy.

We think the research reported here raises a number of both substantive and methodological issues worth discussing. Recent research on young children's use of information in evaluating products has yielded contrasting results. Butzin and Anderson's (1973) study indicated that kindergarteners consistently used an averaging process in forming judgments when two items of information were involved. On the other hand, Capon and Kuhn (1978) found evidence of considerable inconsistency in kindergarteners' approach to evaluating a set of options where four dimensions of information were involved. Their results indicated that perhaps kindergarteners use a "shifting single dimension strategy" in developing a set

of evaluations, similar to a basic ordering principle identified by Inhelder and Piaget (1964).

In the present study, we found that the great majority of kindergarteners (83%) used a consistent strategy in making a series of choices. This is despite the fact that our information environment was *more* complex than Capon and Kuhn's, at least on the surface. Every card involved at least two attribute dimensions, for which both attribute importance and attribute amount information was relevant. Thus, each choice may have involved eight or more items of relevant information, compared to only four in the Capon and Kuhn study.

However, it is probably the case that our kindergarten subjects coded the information in such a way as to simplify it considerably. In particular, as indicated by the large numbers who used an amount strategy, many may have simply coded one aspect of information—the total number of items in each candy—and ignored all other aspects of the information. Thus, by simplifying the information environment to a single dimension, they were able to apply a consistent choice principle with ease.

Similarly, others who used a best single attribute strategy also may have simplified the information environment by focusing only on the number of items in a specific subclass, i.e., the most important single attribute—chocolate or, later, caramel. For these subjects, too, simplifying the information environment may have made it easy to apply their preferred strategy with high consistency.

It may be the case that young children are always able to apply evaluation or choice strategies consistently when they are able to code—or recode—the information presented such as to simplify it considerably. On the other hand, they may not be able to use a strategy consistently, when they cannot do this.

We believe the methodological approach utilized here has a number of advantages. Perhaps one of its chief advantages is that it can be very helpful in developing conceptualizations of a process. For example, analysis of the variety strategy indicated that performance of this strategy involved the following operations: (1) ignoring the total amount of each candy; (2) ignoring the amounts involved in subclasses of each candy, such as amount of chocolate, raisins, or peanuts; (3) focusing on and counting the number of subclasses contained in each candy; and (4) choosing the one with the most subclasses.

When we combined this "task analysis" with some developmental principles, it suggested to us that few of the kindergarteners would be likely to use the variety strategy because it required that a dominant perceptual cue—the number of items—be ignored. Thus, thinking about the strategies for the purpose of developing our measure of choices was very useful for conceptual and hypothesis development. As Newell and Simon (1972) and Dawes (1975) point out, this kind of task analysis is essential in conceptualizing human information processing generally.

Other, more methodologically oriented strengths of the choice pattern procedure include the following: (1) it places minimal reliance on verbal behavior though verbal aspects of the measurement can be useful for providing validation of the choice pattern as well as other information regarding subject's strategies; (2) it provides an opportunity to assess consumer choice strategies in terms of a sequence of choices, and, at the same time, to examine the impact of specific situational factors on consumer choices; and (3) the procedure allows subjects the freedom to combine information in any way they choose, the key methodological requirement for measuring consumers' choice strategies, as we see it.

A major drawback of the procedure, however, is that it does not duplicate real shopping situations, so that inferences to child consumers' in-store behavior are suspect. However, it may be possible to modify the procedure to make it more realistic. This, of course, would result in losing some control of the information environment.

A CONCLUDING NOTE

In this chapter we have attempted to outline some new approaches to examining the young child as consumer. We feel that the information processing approach we have utilized in our past research has been informed by considering two important conceptual clarifications: first, adequate analysis of the information processing task posed in various consumer situations whether it be watching television advertising or making product choices; and second, attempting to assess through various measurement strategies children's optimal performance in task situations. Of crucial concern is that the researcher attempt to assess whether the child is *unable* to perform a task, i.e., has a cognitive deficit, or whether the child can perform the task under certain circumstances, i.e., has a production deficiency.

In the area of examining children's memory for television advertising, we believe that the two above-noted distinctions have led us to better estimate young children's recollections of advertising information. In addition, they have provided us with a totally new direction for examining children's product choice behavior. We believe that our conceptual distinctions between the TV viewing situation and product choice situations will better help us analyze precisely how advertising information may impact on consumer choices. For the moment, our concern is with adequate assessment of the young child's performance in these two situations. In future, we will be examining in greater detail how the one impacts on the other.

REFERENCES

Berlyne, D.E. (1970). "Children's reasoning and thinking." In P.H. Mussen (ed.), Carmichael's manual of child psychology. New York: Wiley.

Bransford, J.E., and McCarrell, N.S. (1974). "A sketch of a cognitive approach to comprehension: Some thoughts about what it means to comprehend." In W.B. Weimer and D.S. Palermo (eds.), Cognition and symbolic processes. New York: Winston.

Brown, A.L. (1975a). "The development of memory." In H.W. Reese (ed.), Advances in child development and behavior, 10. New York: Academic Press.

———. (1975b). "Recognition, reconstruction and recall of narrative sequences by preoperational children." Child Development, 46:156-166.

Butzin, C.A., and Anderson, N.H. (1973). "Functional measurement of children's judgments." Child Development, 44:529-537.

Capon, N., and Kuhn, D. (1978). "The development of consumer information processing strategies." Unpublished manuscript, Harvard University.

Caron, A., and Ward, S. (1975). "Gift decisions by kids and parents." Journal of Advertising Research, 15:15-20.

Case, R. (1974). "Structure and stricture: Some functional limitations on the course of cognitive growth." Cognitive Psychology, 6:544-574.

Cellerier, G. (1972). "Information processing activities in recent experiments in cognitive learning—Empirical studies." In S. Farnham-Diggory (ed.), Information processing in children. New York: Academic Press.

Dawes, R.M. (1975). "The mind, the model and the task." Pp. 119-130 in F. Restle, R.M. Shifrin, N.J. Castellan, H.R. Lindman, and D.P. Pisoni (eds.), Cognitive theory, Vol. 1. New York: Wiley.

Flavell, J.H. (1970). "Developmental studies of mediated memory." In Advances in child development and behavior, Vol. 5. New York: Academic Press.

———. (1971). "First discussant's comment: What is memory development the development of?" Human Development, 14:272-278.

———. (1977). Cognitive development. Englewood Cliffs, N.J.: Prentice-Hall.

Hansen, F. (1976). "Psychological theories of consumer choice." Journal of Consumer Research, 3:117-142.

Hendrick, C., Frantz, C.M., and Hoving, K.L. (1975). "How do children form impressions of persons? They average." Memory and Cognition, 3:325-328.

Holbrook, M.B., and Hulbert, J.M. (1975). "Multi-attribute attitude models: A comparative analysis." In M.J. Schlinger (ed.), Advances in consumer research, Vol. 2. Chicago: Association for Consumer Research.

Inhelder, B., and Piaget, J. (1964). The early growth of logic in the child. New York: Norton.

Kobasigawa, A. (1974). "Utilization of retrieval cues by children in recall." Child Development, 45:127-134.

Kohlberg, L. (1969). "The cognitive-developmental approach to socialization." Pp. 347-480 in D. Goslin (ed.), Handbook of socialization theory and research. Chicago: Rand-McNally.

Liebert, D.E., Sprafkin, J.N., Leibert, R.M., and Rubenstein, E.A. (1977). "Effects of television commercial disclaimers on the product expectations of children." Journal of Communication, 27:118-124.

Newell, A., and Simon, H.H. (1972). Human problem-solving. Englewood Cliffs, N.J.: Prentice-Hall.

Paris, S.G. (1975). "Integration and inference in children's comprehension and memory." In F. Restle, R.M. Shiffrin, N.J. Castellan, H.R. Lindman, and D.P. Pisoni (eds.), Cognitive theory, Vol. 1. New York: Wiley.

Pascual-Leone, J. (1970). "A mathematical model for the transition rule in Piaget's developmental stages." Acta Psychologica, 63:301-345.

——— and Smith, J. (1969). "The encoding and decoding of symbols by children: A new experimental paradigm and a neo-Piagetian Model." Journal of Experimental Child Psychology, 8:328-355.

Payne, J.W. (1976). "Heuristic search processes in decision-making." Pp. 321-327 in B.B. Anderson (ed.), Advances in consumer research, Vol. 3. Cincinnati: Association for Consumer Research.

Piaget, J. (1968). On the development of identity and memory. Worcester, Mass: Clark University Press and Barre.

——— and Inhelder, B. (1973). Memory and Intelligence. New York: Basic Books.

Ritter, K., Kaprove, B.H., Fitch, J.P. and Flavell, J.H. (1973). "The development of retrieval strategies in young children." Cognitive Psychology, 5:310-321.

Robertson, T.S., and Rossiter, J.R. (1977). "Children's responsiveness to commercials." Journal of Communication, 27:101-106.

Rossiter, J.R. (1975). "Visual and verbal memory in children's product information utilization." In B.B. Anderson (ed.), Advances in consumer research, Vol. 3. Cincinnati: Association for Consumer Research.

Rubin, R.S. (1972). "An exploratory investigation of children's responses to commercial content of television advertising in relation to their stages of cognitive development." Unpublished Ph.D. dissertation, University of Massachusetts.

Wackman, D.B., and Ward, S. (1975). "The development of consumer Information processing skills: Contributions of cognitive development theory." In B.B. Anderson (ed.), Advances in consumer research, Vol. 3. Cincinnati: Association for Consumer Research.

Wartella, E., and Ettema, J.S. (1974). "A cognitive developmental study of children's attention to television commercials." Communication Research, 1:46-69.

Wilkie, W.L., and Pessemier, E.A. (1973). "Issues in marketing's use of multi-attribute attitude models." Journal of Marketing Research, 10:428-441.

Wright, P. (1975). "Consumer choice strategies: Simplifying vs. optimizing." Journal of Marketing Research, 12:60-67.

——— and Barbour, F. (1975). "The relevance of decision process models in structuring persuasive messages." Communication Research: 2:246-259.

CHAPTER 10

Research on Television Advertising's General Impact on Children: American and Australian Findings

JOHN ROSSITER

JOHN ROSSITER

Research on Television Advertising's General Impact on Children: American and Australian Findings

PART ONE — AMERICAN RESEARCH

ABSTRACT

A review of the American research on TV advertising's general impact on children suggests two important conclusions: (1) TV advertising has no lasting cognitive effects and does not make children more "persuasible." (2) However, children of all ages are "persuaded" in the sense that they see many products attractively advertised on TV and will ask for those products that interest them. The review raises an issue as to whether persuasion via TV advertising is per se undesirable when no lasting cognitive impact on children can be demonstrated.[1]

INTRODUCTION

American and Australian children are exposed to large amounts of TV advertising. The average American child encounters about 20,000 TV commercials a year; the average Australian child probably encounters even more.[2] Parents and policy makers in both countries have expressed considerable concern about the effects of this exposure on children. Part of the concern relates to the short-run effects of specific advertising practices on children. But much of the concern relates to the effects of children's exposure to TV advertising in general. This paper reviews the evidence from U.S. research on the *general* impact of TV advertising on children.

Two types of general effects may be discerned: cumulative exposure effects and heavy viewing effects. Cumulative exposure effects refer to the impact of TV advertising on children as they grow older and thus see more commercials. Heavy viewing effects refer to the impact of TV advertising on children who, *within* age groups, are more heavily exposed to commercials than their peers.

In assessing cumulative exposure effects and heavy viewing effects, it is important to specify the types of effects we are talking about. This paper examines three categories of specific effects: (1) *cognitive effects*, focusing on children's ability to understand the nature and purpose of TV advertising; (2) *attitudinal effects*, focusing on children's feelings toward TV commercials and their reaction to TV advertising as a social institution; and (3) *behavioral effects*, focusing on the extent to which children are persuaded to want, and to ask for, advertised products.

CUMULATIVE EXPOSURE EFFECTS

During his or her daily 3½ hours of TV viewing, the average American child is exposed to about 55 commercials. This amounts to approximately 20,000 commercials a year, or a massive 200,000 commercials, in total, from age two to age twelve. As noted earlier, the average Australian child's experience is similar.

Cognitive Effects

Perhaps the most important cognitive effect is children's ability to *understand* commercials as a function of cumulative experience. Rossiter & Robertson (1976) examined children's understanding of the conceptual basis of television commercials in terms of six variables which measured children's ability: (1) to define the difference between television commercials and television programs; (2) to comprehend the existence of an external message source or sponsor; (3) to perceive the existence of intended target audiences for commercial messages; (4) to identify informative intent in commercials; (5) to identify persuasive intent in commercials; and (6) to understand their symbolic representational characteristics. Total cognitive understanding of commercials was highly correlated with age ($r = .63$, $p. .001$). Further analysis demonstrated that age and cumulative experience accounted for 40% of the variance in cognitive understanding while differences in social background accounted for only 9%. Using a similar but partial set of measures,

Ward, Wackman & Wartella (1975) also found a highly significant increase in children's cognitive understanding of commercials as a function of age.

It is clear that, for the average child, cumulative exposure to commercials has a definite positive effect on his or her cognitive understanding of what commercials are and what they are supposed to do. This effect may be due, of course, not only to cumulative experience, but also, following Piaget's theory, to age-related increases in children's general cognitive abilities. Nevertheless, it is reasonable to regard these cognitive measurement results as evidence against the proposition that children become more "mentally" susceptible to TV advertising techniques as they are exposed to more TV advertising.

Attitudinal Effects

Apart from the question of whether children understand commercials is the question of whether children like television commercials and how these "institutional" feelings change with age. An impressive body of studies has documented that children's overall attitudes toward commercials decline significantly with age (James, 1971; Blatt, Spencer & Ward, 1972; Robertson & Rossiter, 1974; Ferguson, 1975; Bever, Smith, Bengen & Johnson, 1975). For instance, the percentage of children who indicated that they liked *all* commercials was shown in one study to decline from 69% at first grade to 56% by third grade and 25% by fifth grade (Robertson & Rossiter, 1974). The decline in children's attitudes seems to apply to specific commercials as well as to commercials in general. Atkin (1975a) measured children's overall liking for three specific commercials and found a negative correlation of $r = -0.35$ ($p.001$) with age.

Behavioral Effects

An obvious question, given the increase in children's cognitive understanding of commercials with age and their increasingly negative feelings toward them, is whether commercials have any less *behavioral* impact on children as they grow older. This is not an easy question to answer. One problem is the distinction between intended behavior and actual behavior. Commercials may instill intentions or desire for an advertised product, but the execution of these intentions in most cases requires the child to make requests to parents. This process introduces other variables pertinent to the

requesting behavior, and these other variables may have little to do with the impact of the commercials per se. Consequently, it is wise to examine not only requests, or actual behavior, but intended behavior as well.

The evidence on intended behavior as a function of age is dependent on the nature of the research measure. For example, Robertson & Rossiter (1974) asked children whether they wanted *all* products they saw advertised on television. Responses indicated the expected age-related decline: 53% said yes at first grade, 27% at third grade, and only 6% answered affirmatively at fifth grade. However, a more moderate question used by Ward et al. (1975) asked children whether they wanted *most* things shown in television commercials. A slightly broader age range was sampled, making the results even more interesting: 66% of kindergarten children said yes, 51% of third graders said yes, and a marginally lower 49% of sixth graders said yes. Moreover, when asked whether commercials "made them want to have things," the children in the Ward et al. study exhibited an apparent *increase* in perceived motivation with age: affirmative answers by age group were kindergarten, 67%; third grade, 76%; and sixth grade, 84%. Evidence for a decline in advertising-induced intentions with age and cumulative exposure is therefore slight at best.

Evidence on the actual behavioral effects of TV advertising as a function of age and cumulative exposure requires careful interpretation. Because children do not have the means to buy many products, and therefore must ask their parents to buy products for them, the most widely applicable behavioral effects measure is request frequency. Robertson and Rossiter (1974) found a decrease in request frequency with age; however, their study focused on pre-Christmas television advertising in which almost half of the advertised products were toys and games. These items may simply be of less interest as children grow older. This criticism may also be applied to the frequently heard interpretation of a classic study by Ward & Wackman (1972) to the effect that children's request frequencies decline with age.[3] Detailed inspection of the product-by-product data in the Ward & Wackman study indicates various trends by age depending on the product in question. For example, requests for toys declined with age, but requests for bicycles increased. Requests for products which are television advertised and which are presumably relevant to children of all ages, such as snack foods and soft drinks, did not show any age-related decline

in request frequency. This non-decline effect was substantiated in a later study by Ward et al. (1975) in which requests for food products were essentially constant across age groups (X^2, n.s.) and requests for "child-relevant" products, such as toys and games, clothing, and record albums, actually increased significantly with age (X^2, p .01). The earlier Ward & Wackman (1972) study is much more comprehensive in terms of product categories and should probably be favoured over the Ward *et al* (1975) results. Neither study, however, revealed any general decline in request frequencies as a function of age and cumulative exposure to commercials.

Before interpreting request frequencies as data on "effects," we must consider the problem referred to earlier—namely, that requesting behavior is under the control of factors other than advertising-induced intent.

One obvious factor is the extent to which parents acquiesce to children's requests and thus reinforce this form of behavior. The Ward & Wackman study (1972) found that acquiescence increases with the child's age ($r = .20$, p .01). To provide two illustrative trends for products relevant to children of all ages: the percentage of mothers who said they usually yield to children's requests for snack foods was 52% for 5-7 year-olds and rose linearly to 77% for 11-12 year-olds; comparable acquiescence figures for soft drink requests were 38% and 54%. An alternative hypothesis is that peer influence, or other non-advertising experiences, might induce request behavior. However, Ward & Wackman's results indicated that the role of television advertising in the requesting process was relatively constant across age groups ($r = -.14$, n.s.). That is, television advertising did not seem to be displaced by peer influence or other factors.

It therefore appears that parental acquiescence, a form of reinforcement, is the main factor that "confounds" request frequencies as a measure of advertising effects. Because parental acquiescence increases with age, we should discount the earlier implication of a constant *advertising-induced* request level. A more accurate projection, adjusting for parental acquiescence, would be a slight decline in request levels. Thus, the safest conclusions from the available evidence are that the cumulative exposure effect of commercials is to reduce children's intentions or desire for advertised products only slightly and to produce a similarly slight reduction in the frequency of advertising-induced requests to parents.

How is the slight decline in behavioral effects with age to be reconciled with the marked increase in children's cognitive understanding of commercials and the equally marked decline in their effective feelings toward commercials? The most parsimonious explanation would be abandonment of the implicit hypothesis that children who understand commercials better and like them less will be less affected by them. This hypothesis assumes that commercials are in some way "bad," that they are not supposed to persuade children to want the advertised products, or that children become poorer judges of advertised products as they grow older. All are questionable assumptions. I shall return to this point in the summary.

HEAVY VIEWING EFFECTS

The analysis of cumulative exposure effects was based on the average child's exposure to TV advertising, using data averaged by age level. Although the average American child watches TV for 3½ hours a day, this figure ranges from an hour or less per day for light viewers to as many as six hours per day for heavy viewers) (Adler et al., 1977). The range for potential exposure to commercials is thus about 14 to 86 per day, or about 5,400 to 32,600 per year, depending on the child's viewing habits. A similar range of exposure to TV advertising could be estimated from Tindall & Reid's (1975) Australian viewing figures.

An issue therefore arises as to whether heavy viewers, within age groups, differ from light viewers in terms of the impact of TV advertising. Once again, I shall discuss TV advertising's impact on heavy viewing children in terms of cognitive, attitudinal, and behavioral effects.

Cognitive Effects

Amount of television viewing at a given age level has no effect on children's ability to understand the nature and purpose of TV commercials. It may be recalled that Rossiter & Robertson's (1974) study of children's cognitive understanding of TV commercials found significant effects by age (40% of the variance) and by social background (9%). Analysis of cognitive understanding by viewing level produces a nonsignificant correlation of $r = -0.20$, with differences in viewing level accounting for a negligible amount of the

variance in children's cognitive understanding of TV commercials (4%). Heavy viewers, therefore, are no more—and no less—sophisticated regarding TV advertising than their lighter viewing peers.

Attitudinal Effects

Heavy viewers tend to have more favorable attitudes toward television commercials. Children's attitudes toward commercials become more negative as they grow older, but heavy viewers *within* age groups hold more positive attitudes than their peers. For example, Rossiter & Robertson (1976) found a significant correlation of $r = .24$ (p .05) between attitudes and television exposure with age held constant (the measure of attitudes in this study included trust, liking and behavioral intention scales). A similar correlation of $r = .30$ (p .01) was found by Atkin (1975a). For older children at least, it seems improbable that liking of commercials "causes" television viewing. Surely, interest in programs leads to viewing. Therefore, it is a fairly safe assumption that, for commercials, the direction of cause and effect is from exposure to attitudes, so that heavy television viewing causes children to like TV commercials.

Behavioral Effects

An interesting study of the behavioral effects of heavy TV advertising was conducted by Robertson & Rossiter (1976) in conjunction with pre-Christmas TV promotions for toys and games. During November and December, TV commercials for toys and games comprise about 50% of children's advertising; thus, even normal viewers become "de facto" heavy viewers for this product category. Using Christmas present choices as the behavioral effects measure, Robertson & Rossiter found that children's choice of toys and games, relative to other, less advertised items, increased by an average of 5% per child over the pre-Christmas advertising period.[4] This result was statistically significant (p .05) and it assumes practical significance when we realize the meaning to toy and game manufacturers of a 5% increase in sales. The interesting aspect is that the increases were identical for all three age levels studied: first, third and fifth grades. Heavy exposure therefore had an effect regardless of the child's age and level of sophistication.

Positive relationships between heavy TV viewing and children's requests for advertised products have also been reported by other researchers. Atkin (1975b), for example, after controlling for

children's age levels, found a significant correlation of $r = .29$ ($p < .01$) between TV viewing and requests for toys and cereals.

In sum, the evidence on heavy viewing effects reveals, firstly, that children who are exposed to more TV advertising than their peers do *not* show less understanding of TV commercials. This counts against the contention that heavy viewers are more easily persuaded by each commercial they see. On the other hand, heavy viewers do exhibit greater liking of TV commercials and they also respond to them more favorably—in aggregate—than lighter viewers. The greater aggregate responsiveness of heavy viewers is best explained by realizing that they see more commercials to be persuaded by, and not, as noted, by speculating that they are more easily persuaded by each commercial they see.

SUMMARY AND IMPLICATIONS

American research on the impact of TV advertising on children began before Australian research on the topic. Accordingly, Australian parents and policy makers may find the U.S. research results instructive (see Adler et al, 1977). The purpose of this paper has been to summarize that aspect of the literature pertaining to the general effects of TV advertising on children, analyzed as cumulative exposure effects (with age) and heavy viewing effects (within age groups).

1. *Cognitive effects.* Children's cognitive understanding of the nature and purpose of TV commercials increases dramatically with age and thus with cumulative exposure; heavy viewers, within age groups, show no less understanding of TV commercials than their lighter viewing peers.
2. *Attitudinal effects.* Children's attitudes toward TV commercials decrease dramatically with age and thus with cumulative exposure; heavy viewers, within age groups, show less of a decrease, and therefore hold more favorable attitudes toward TV commercials, than their lighter viewing peers.
3. *Behavioral effects.* Children's desires for advertised products, and their requests to parents to buy these products, hardly decline at all with age and thus with cumulative exposure; heavy viewers, within age groups, want more advertised products, and ask for them more often, than their lighter viewing peers.

Several implications may be drawn from these findings:

First, exposure to TV advertising does not make children more cognitively or mentally susceptible to persuasion. The behavioral effects data indicate that children are persuaded by commercials—but this, after all, is the purpose of advertising. There is no evidence to support the fear that this persuasion has any lasting cognitive effects on children.

Second, children's increasingly negative *expressed* attitudes toward TV advertising do not mean much. Most adults say they themselves dislike TV advertising, but study after study (or a simple pantry check) shows that the same adults continue to be influenced by it. Children are no different; they merely acquire an adult-like attitude against TV advertising as a social institution, an attitude which bears little relationship to advertising's actual effects.

The final implication is more of an admonition: some TV commercials may be deceptive to children, but most are not. This is certainly true in the U.S and is probably true in Australia. Arguments against TV advertising to children based on charges of generalized deception and youthful gullibility are simply not supported by the evidence. The research suggests a more rational model of the developing child *vis-a-vis* TV advertising—a model in which the child understands what he or she sees and hears in most commercials, selects those products which are interesting and attractive, and asks for them. Persuasion of this kind may be deemed undesirable, but this is probably because of its consequences for parents rather than its consequences for children.

FOOTNOTES

1. This article is based in part on a chapter prepared by the author which appeared in a National Science Foundation report, *Research on the Effects of Television Advertising on Children*, by Adler, Faber, Friedlander, Lesser, Meringoff, Pillemer, Robertson, Rossiter & Ward (1977). The report is available at $3.75 (U.S.) per copy from The Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, U.S.A. Order No. 038-000-00336-4.
2. The average American child watches television for 3.6 hours a day, or about 25 hours a week, of which just over 3 hours, conservatively, are devoted to commercials (Adler et al., 1977). The average Australian child watches television for 3.0 hours a day, or about 21 hours a week, of which just over 4 hours, by one count, are devoted to commercials (Tindall & Reid, 1975). The Australian estimate may be liberal, or perhaps advertisers are allowed more time per hour on Australian TV. American advertisers, by the way, are allowed 9.5 minutes per hour during weekend children's programs and during the 6:00 p.m. to midnight evening period; 12 minutes per hour on non-weekend children's programs; and 16 minutes per hour otherwise.

3. Ward & Wackman in fact found only a non-significant tendency for request frequencies to decline with age ($r = -.13$; an r of $+.16$ would have been required for significance at the 5% level).
4. A conservative formula was used to compute the 5% figure. The normal "percentage increase" interpretation would have been about 8 to 10% per child.

REFERENCES

Adler, R.P., Faber, R., Friedlander, B.Z., Lesser, G.S., Meringoff, L., Pillemer, D., Robertson, T.S., Rossiter, J.R. & Ward, S. *Research on the Effects of Television Advertising on Children*. Washington, D.C.: National Science Foundation, 1977.

Atkin, C.K. *Effects of Television Advertising on Children: First Year Experimental Evidence. Report No. 1*. East Lansing, Michigan: Department of Communication, Michigan State University, 1975(a).

Atkin, C.K. *Effects of Television Advertising on Children: Survey of Children's and Mother's Responses to Television Commercials. Report No. 8*. East Lansing, Michigan: Department of Communication, Michigan State University, 1975(b).

Bever, T.G., Smith, M.L., Bengen, B. & Johnson, T.G. Young viewers' troubling responses to TV ads. *Harvard Business Review*, 1975, *53*(6), 119-121.

Blatt, J.L., Spencer, L. & Ward, S. A cognitive developmental study of children's reactions to television advertising. In Rubinstein, E.A., Comstock, G.A. & Murray, J.P. (eds.). *Television and Social Behavior: Vol. IV*. Washington, D.C.: U.S. Government Printing Office, 1972, 452-467.

Ferguson, C.P. *Preadolescent Children's Attitudes Toward Television Commercials*. Austin, Texas: Bureau of Business Research, University of Texas, 1975.

James, D.L. *Youth, Media, and Advertising*. Austin, Texas: Bureau of Business Research, University of Texas, 1971.

Robertson, T.S. & Rossiter, J.R. Children and commercial persuasion: an attribution theory analysis. *Journal of Consumer Research*, 1974, *1*(1), 13-20.

Robertson, T.S. & Rossiter, J.R. Short-run advertising effects on children: a field study. *Journal of Marketing Research*, 1976, *13*(1), 68-70.

Rossiter, J.R. & Robertson, T.S. Canonical analysis of developmental, social and experimental factors in children's comprehension of television advertising. *Journal of Genetic Psychology*, 1976, *129*, 317-327.

Rindall, K. & reid, D. *Audio-Visual Research: 1. Television's Children*. Audio Visual Centre, Sydney Teachers College, copyright K. Tindall/D. Reid, 1975.

Ward, S. & Wackman, D.B. Children's purchase influence attempts and parental yielding. *Journal of Marketing Research*, 1972, 9(3), 316-319.
Ward, S., Wackman, D.B. & Wartella, E. *Children Learning to Buy: The Development of Consumer Information Processing Skills*. Cambridge, Massachusetts: Marketing Science Institute, 1975.

PART II — AUSTRALIAN CONFIRMATION OF AMERICAN FINDINGS

INTRODUCTION

In the March 1978 edition of *AJEC* I reviewed the American research on TV advertising and children and drew some implications for Australian children. A major conclusion from the American research was that, although children's *attitudes* toward TV advertising become less favourable as they grow older, their *behaviour* does not follow suit. The behavioural effects of TV advertising, such as requests for advertised products, remain essentially constant across age groups. In other words, there is no support for the contention that the more favorable attitudes of younger children and the more sceptical attitudes of older children translate to greater and lesser likelihoods, respectively, of them being persuaded by TV commercials.

A recent Australian study confirms this conclusion. The study was conducted by Glenda Jones of the Tasmanian College of Advanced Education. The major findings were reported in an article in *The National Times* of August 26, 1978, p.32.

JONES' AUSTRALIAN STUDY

Dr Jones surveyed 1,181 school children aged 8 to 15 years, although I will focus only on her results for the 8 to 13 year-old age range, since this more properly encompasses children.

Her survey included a question on the extent to which children like television commercials (a general measure of attitude) and another question on the extent to which they buy things they have seen advertised on TV (a general measure of behavioural effects). The answers, by age group, are shown in table on opposite page.

DISCUSSION

The attitudinal results are consistent with increasingly negative attitudes toward TV advertising as children grow older, as found in the American studies. As an approximate summary statistic, one might weigh the "like a lot" responses as 1, the "all right" responses as 0, and the "don't like them" responses as 1. On this basis, "net" attitudes towards TV commercials are +1 among 8-9 year-olds, −24 among 10-11 year-olds, and +23 among 12-13 year-olds, indicating a negative attitudinal trend in later childhood. Had younger children been surveyed, the positive to negative pattern may have been more marked, at least to the extent that Australian children are similar to American children.

		Age Group		
Attitude		8-9 Years	10-11 Years	12-13 Years
Do you like	A lot	19%	8%	4%
television commercials?	They're all right	63	59	68
	Don't like them	18	32	27
	Totals (rounded)	100%	99%	99%
Behavior		8-9 Years	10-11 Years	12-13 Years
Do you buy things you have seen advertised on TV?	Quite often	12%	7%	6%
	Sometimes	75	77	84
	Never	13	15	9
	Totals (rounded)	100%	99%	99%

Despite the negative attitudinal trend, the behavioural results are consistent with the conclusion that there is little difference in the behavioural impact of TV commercials by age group. Although the percentage of children who indicated they "quite often" buy things they see advertised on TV declines slightly with age so also does the percentage who would "never" buy them. The impression is that children are quite similarly affected by TV commercials regardless of age. Note also that the majority of children's responses to TV advertising are quite selective: they *sometimes* buy things they see advertised.

Of course, the usual cautions should be noted on Dr Jones' behalf for the implications I have drawn from her data. In particu-

lar: (1) extension of the study to younger age groups may have shown stronger attitudinal and behavioural effects among children below the age of 8; (2) the results are based on self-reports which, in the case of behavioural effects, may lack validity in relation to, for example, observational measures of purchase behaviour; and (3) the behavioural measure does not acknowledge the fact that it is *parents*, not children, who do most of the actual buying. This latter realization may have resulted in the underestimation of the behavioural effects of TV commercials on younger children, especially, as their primary response is more likely to be a request for purchase than actual purchase of the product, given their limited pocket money and less parentally permitted purchasing discretion at younger age levels. On the other hand, children may have interpreted the "Do you buy" question in a more general way to include the effects of parental purchases.

CONCLUSIONS

Dr Jones' Australian study, like the American research, casts doubt on the popular belief that younger children are more "vulnerable" to TV advertising than are older children. This belief is apparently held by the Australian Broadcasting Tribunal (Strickland, 1978) and probably by many others unfamiliar with the research in this field.

Findings from both countries indicate that TV advertising does not "prey" on younger children more than older children. Also, it should be reiterated that no undesirable consequences of TV advertising to children have been demonstrated other than that children occasionally pester parents for products they see advertised. This is the result of free speech (advertising) protected by the Australian constitution; it is not the result of any demonstrated "subliminal persuasion" force inherent in TV advertising. Parents must decide whether a degree of pestering is a reasonable price to pay for commercially sponsored television programming.

REFERENCES

Jones, G. Research findings reported in an article by D. Hickie, "The message misses its mark." *The National Times*, week ending August 26, 1978, 32.

Rossiter, J.R. American research on T.V. advertising's general impact on children. *Australian Journal of Early Childhood*, 1978, 3(1), 15-19.

Strickland, J. Television and the young child. *Australian Journal of Early Childhood*, 1978, 3(1), 7-13.

ABOUT THE CONTRIBUTORS

JUNE E. ESSERMAN is Chief Executive Officer of Child Research Service, a division of Hyatt/Esserman Research Associates whose headquarters are in New York City. She was previously associated with Daniel Yankelovich Incorporated, and was a research associate in the Department of Animal Behavior at the Museum of Natural History in New York City. Mrs. Esserman has taught at New York University, and lectured on child development at the Haile Selassie Medical School in Addis Ababa, Ethiopia, where she instituted a "reading readiness"program for blind children.

Mrs. Esserman received two M.A. degrees from New York University: one in animal psychology and one in child psychology. She also received the M.A. degree in social psychology from the New School for Social Research. She has authored many research papers, consulted with many firms and government agencies and has testified before the Federal Trade Commission in Washington D.C. She has been studying children in the People's Republic of China since 1973 when she visited that country at the invitation of the Chinese Government. She is presently coauthoring a book with her associate, Ann Ping Woo, based on their interviews with children in China. Mrs. Esserman is a member of The American Sociology Association, The American Association for Public Opinion Research and The American Psychological Association.

LLOYD BARENBLATT is associate professor in the department of Organizational and Administrative Studies, New York University. He has taught previously at Nassau College and The University of Michigan. Formerly, he was Director of Psychological Research for The Center for Research and Marketing and The Commercial Analyst Company.

Dr. Barenblatt received the Ph.D. in social psychology from the University of Michigan and the B.S. from the College of the City of

New York. He has published in several books and professional journals including *Public Opinion Quarterly, American Sociological Review, Sociometry,* and the *Journal of Personality and Social Psychology.* He is a member of the American Psychological Association.

GEORGE COMSTOCK is the Samuel I. Newhouse Professor of Public Communications, Syracuse University. He was formerly Senior Social Psychologist at the Rand Corporation and Science Advisor and Senior Research Coordinator to the Surgeon General's Scientific Advisory Committee on Television and Social Behavior. He has previously taught at New York University.

Dr. Comstock received the B.A. from the University of Washington and the M.A. and Ph.D. in Communications from Stanford University. He has written many chapters in books, reports, and professional journal articles, including articles for the *Journal of Communication, Television and Children, Journalism Quarterly,* and *Contemporary Psychology.* He is consulting editor for the *Journal of Communication,* associate editor for the *Journal of Applied Communication Research* and on the editorial board of *Public Opinion Quarterly.* He is author of *Television In America (1980)* and *Television and Human Behavior: The Key Studies (1975);* coauthor of *Television and Human Behavior (1978), Television and Human Behavior: A Guide to the Pertinent Scientific Literature (1975), Television and Human Behavior: The Research Horizon, Future and Present;* and co-editor of *Television and Social Behavior*—Volumes I, II, III, IV, and V. He is a member of The National Broadcasting Company's Social Science Advisory Panel, The National Council for Children and Television, The Advertising Council-Law Enforcement Administration advisory panel and The Board of Directors of the Center for Interdisciplinary Legal Studies at Syracuse University College of Law.

LESLIE F. GAINES is a consultant in research methodology and child development in New York City. She received the B.A. from the University of Michigan and the M.A. and Ph.D. in Child Development from New York University. She has worked as a Research Associate at New York Medical College and at Child Research Services in New York.

Dr. Gaines is a member of the American Psychological

Association, Phi Delta Kappa, American Marketing Association, and American Association of Public Opinion Research.

LAWRENCE J. GIANINNO is a doctoral candidate in The Department of Behavioral Sciences, University of Chicago. He received the B.A. from Boston College and two M.A.'s; one from Northwestern University and one from the University of Chicago. Formerly, he was a researcher for Needham, Harper & Steers Advertising, Inc.

Mr. Gianinno previously served as chairman for the American Association of Advertising Agencies' Committe on Children's Cognitive Development. He is a member of The Society for Research in Child Development, The Society for Psychological Anthropology, and the Association for Consumer Research.

MARTIN HOFFMAN is professor in the Department of Psychology, The Graduate School of The City University of New York. He was previously senior research associate at the Merrill-Palmer Institute. He has taught at Purdue University, and University of Michigan. He received the B.S. from Purdue University and the M.S. and Ph.D. in psychology from the University of Michigan.

Dr. Hoffman has published chapters in many books and articles in many professional journals including *Merrill-Palmer Quarterly, American Psychologist, Journal of Personality, Child Development, Public Opinion Quarterly,* and *International Journal of Behavioral Development.* He is presently associate editor of *Developmental Psychology* and past editor of *Merrill-Palmer Quarterly.* He is chairman of The Social Science Research Council, Committe on Social and Emotional Development and a fellow of both The American Psychological Association and The American Association for Advancement of Science. He is a member of The Society for Research in Child Development.

HOPE LUNIN KLAPPER is associate professor in the Department of Sociology, New York University. She formerly taught at Queens College and Connecticut College for Women. She previously worked as a researcher for International Research Associates.

Dr. Klapper received the B.A. from Queens College, the M.A. from the University of Oregon, and the Ph.D. in Sociology from

Columbia University. She is the author of 3 monographs about instructional television and about children and television. Dr. Klapper has also published papers and articles in journals including *Educational Sociology, California Management Review,* and *Educational Television.* She was past president of The American Association for Public Opinion Research and is a member of The American Sociological Association.

JOHN R. ROSSITER is an associate professor at the Graduate School of Business, Columbia University. He was previously associated with the Center for Research on Media and Children, The Wharton School, University of Pennsylvania.

Dr. Rossiter received the Ph.D. in communications from the University of Pennsylvania in 1974. He received the M.S. degree in marketing from the University of California at Los Angeles and an undergraduate honors degree in psychology from the University of Western Australia. Publications by Dr. Rossiter have appeared in several books and business journals, including the Journal of Consumer Research and the Journal of Marketing Research. He is coauthor of *The Effects of Television Advertising To Children (1980), Advertising and Children (1979),* and a new book on communication models applied to advertising. He has also published in psychology, sociology, and communication research. He is a member of the American Marketing Association, Association for Consumer Research, International Communications Association, and the Australian, British, and American Psychological Associations.

ELLEN WARTELLA is research assistant professor at The Institute of Communication Research, University of Illinois. Presently, she is a National Institute of Mental Health post-doctoral trainee and Research Associate at The Center for Research for The Influence of Television on Children) (CRITIC), Department of Human Development and Family Life, University of Kansas. She taught previously at Ohio State University.

Dr. Wartella received the B.A. from The University of Pittsburgh and the M.A. and Ph.D. in Mass Communication from the University of Minnesota. Publications by Dr. Wartella have appeared in many professional journals including *The Journal of Communication, Communication Research, American Behavioral*

Scientist, and *Advances in Consumer Research*. She is coauthor of *How Children Learn to Buy* (1977) and editor of *Children Communicating—Media and Development of Thought, Speech, Understanding* (1979). She is a member of The Society for Research in Child Development, Speech Communication Association, Association for Education in Journalism, International Communication Association, International Association for Mass Communication Research, Broadcast Educators Association, and The Association for Consumer Research.

PAUL ZUCKERMAN is currently Vice President of Langbourne Rust Research Inc. in Briarcliff Manor, New York. The company specializes in measuring children's responses to television. Formerly, he was Research Supervisor at Needham, Harper & Steers Advertising.

Dr. Zuckerman received the B.A. from the State University of New York in Buffalo. He received the M.A. and Ph.D. in psychology from The University of Michigan. There he published several articles in professional journals including *Child Development*. He is a member of American Psychological Association and The Association for Consumer Research.